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Sequence 5178, 1	Sequence 6465, A	Sequence 20275,	Sequence 2, Appl	Sequence 11, App	Sequence 1, Appl	Sequence 3, Appl	Sequence 2, Appl	Sequence 12, App	Sequence 4, Appl	Sequence 14, App	Sequence 8, Appl	Sequence 2, Appl	Sequence 5, Appl	Sequence 10, App	Sequence 11, App	Sequence 13, App	Sequence 12, App

## ALIGNMENTS

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APPLICANT: Lyon, Jeffrey A.

APPLICANT: Lyon, Jeffrey A.

APPLICANT: Lyon, Jeffrey A.

APPLICANT: Lyon, Jeffrey A.

APPLICANT: Angov, Evelina

TITLE OF INVENTION: Isolation and Purification of

TITLE OF INVENTION: Protein-142 Vaccine

FILE REFERENCE: 003/241/SAP

CURRENT APPLICATION NUMBER: US/10/057,531A

CURRENT FILING DATE: 2002-01-25

PRIOR APPLICATION NUMBER: US 60/264,535

PRIOR FILING DATE: 2001-01-26

PRIOR FILING DATE: 2001-10-26

NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                                                                                              ; ORGANISM: Artificial sequence ; FEATURE: ; OTHER INFORMATION: E. coli ext US-10-057-531A-7
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US-10-057-531A-7
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Best Local S
Matches 391
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SEQ ID NO 7
LENGTH: 391
TYPE: PRT
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                DKIDLFKNPYDFEAIKKLINDDTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNIS
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APPLICANT: Ângov, Evelîna
TITLE OF INVENTION: Isolation and Purification of
TITLE OF INVENTION: Protein-142 Vaccine
FILE REFERENCE: 003/241/SAP
CURRENT FAPLICATION NUMBER: US/10/057,531A
CURRENT FILING DATE: 2002-01-25
PRIOR APPLICATION NUMBER: US 60/264,535
PRIOR FILING DATE: 2001-01-26
PRIOR APPLICATION NUMBER: US 60/347,564
PRIOR FILING DATE: 2001-10-26
VUMBER OF SEQ ID NOS: 12
SOFTWARE: Apple Macintosh Microsoft Word 6.0
SEQ ID NO 3
LENGTH: 393
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OTHER INFORMATION:
Patent No. 6855322
S-10-057-531A-3
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Best Local Similarity
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Sequence 1, Application US/10057531A
Patent No. 685322
GENERAL INFORMATION:
APPLICANT: Lyon, Jeffrey A.
APPLICANT: Angov, Evelina
TITLE OF INVENTION: Isolation and Purification
TITLE OF INVENTION: Protein-142 Vaccine
FILE REFERENCE: 003/241/SAP
CURRENT APPLICATION NUMBER: US/10/057,531A
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; FEATURE:
; OTHER INFORMATION: E
; OTHER INFORMATION: S
; Patent No. 6855322
US-10-057-531A-2
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APPLICANT: LYON, Jeffrey A.
APPLICANT: Angov, Evelina
TITLE OF INVENTION: Isolation and Purification of
TITLE OF INVENTION: Protein-142 Vaccine
FILE REFERENCE: 003/241/SAP
CURRENT APPLICATION NUMBER: US/10/057,531A
CURRENT FILING DATE: 2002-01-25
PRIOR APPLICATION NUMBER: US 60/264,535
PRIOR FILING DATE: 2001-01-26
PRIOR APPLICATION NUMBER: US 60/347,564
PRIOR FILING DATE: 2001-10-26
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Apple Macintosh Microsoft Word 6.0
SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 97.0%;
Best Local Similarity 89.5%;
Matches 385; Conservative
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GENERAL INFORMATION:
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TYPE: PRT
ORGANISM: Artificial sequence
422
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                                                                                        REECKCLLNYKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRKKITCECTKPDSY 381
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                                                                                                                                                                                                                   DTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNISQHQCVKKQCPENSGCFRHLDE
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                                            PLFDGIFCSS 391
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                                                                                                                                                                                                                                                                                VNKIDDYLINLKAKINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNPYDFEAIKKLIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   E. coli expressed P. falciparum Sequence in pET(50)MSP1-42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 2008.5; DB 2
Pred. No. 3.6e-144;
0; Mismatches 4;
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CURRENT FILING DATE: 2002-01-25

PRIOR APPLICATION NUMBER: US 60/264,535

PRIOR FILING DATE: 2001-01-26

PRIOR APPLICATION NUMBER: US 60/347,564

PRIOR FILING DATE: 2001-10-26

NUMBER OF SEQ ID NOS: 12

SOFTWARE: Apple Macintosh Microsoft Word 6.

SEQ ID NO 1

LENGTH: 546

TYPE: PRT

ORGANISM: Artificial sequence
FEATURE:
FEATURE:

PRIOR FILING DATE: 2001-0-26

PR
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APPLICANT: Hui, George, S.N.
APPLICANT: Ho, Walter K.K.
APPLICANT: Lap-Yin, Pang
TITLE OF INVENTION: Malaria Vaccine
FILE REFERENCE: 23461-2001100
CURRENT APPLICATION NUMBER: US/09/710,000
CURRENT FILING DATE: 2000-11-10
PRIOR APPLICATION NUMBER: 60/226,861
PRIOR APPLICATION NUMBER: 60/165,178
PRIOR FILING DATE: 1909-11-12
PRIOR FILING DATE: 1999-11-12
PRIOR APPLICATION NUMBER: 60/165,178
PRIOR FILING DATE: 1999-11-12
PRIOR APPLICATION NUMBER: 60/168,327
PRIOR FILING DATE: 1999-12-11
NUMBER OF SEQ ID NOS: 11
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 8, Application US/09710000 Patent No. 6660498 GENERAL INFORMATION:
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                                                                                                                                        US-10-057-531A-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 5, Application US/10057531A Patent No. 6855322 GENERAL INFORMATION:
                                                                                                                                                                                                           SOFTWARE: Apple Macintosh Microsoft Word 6.0 SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE:
SEQ ID NO 8
                                                                      Matches
                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                        APPLICANT: Lyon, Jeffrey A.
APPLICANT: Angov, Evelina
TITLE OF INVENTION: Isolation and Purification of P. falciparum Merozoite
TITLE OF INVENTION: Protein-142 Vaccine
TITLE OF INVENTION: Protein-142 Vaccine
TITLE REFERENCE: 001/241/SAP
CURRENT APPLICATION NUMBER: US/10/057,531A
CURRENT FILING DATE: 2002-01-25
PRIOR APPLICATION NUMBER: US 60/264,535
PRIOR FILING DATE: 2001-01-26
PRIOR FILING DATE: 2001-10-26
PRIOR FILING DATE: 2001-10-26
NUMBER: OS 500, 10 NOS: 12
NUMBER: OS 500, 10 NOS: 12
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Best Local Similarity
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                                                                                                                                                      LENGTH: 383
TYPE: PRT
ORGANISM: Plasmodium
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TYPE: PRT
ORGANISM: Unknown
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GSGTMAISVTMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIFTFNLNLNDILNSRL 72
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YFLDVLESDLMQFKHISSNEYIIEDSFKLLNSEQKNTLLKSYKYIKESVENDIKFAQEGI 136
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                                                                      Conservative
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                                                                                 95.0%;
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100.0%; Pred. No. 2.5e-141;
tive 0; Mismatches 0;
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                                                                   Score 1968; DB 2;
Pred. No. 3.6e-141;
0; Mismatches 3;
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                                                                                                                                                          3D7 MSP142
                                                                                                     Length 383;
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                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOTTWARE: PatentIn Release #1.0, Ve:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/195,705
FILING DATE: 14-FEB-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Jacobs, Seth H
REGISTRATION NUMBER: 32140
REFERENCE/DOCKET NUMBER: 1180A3
TELEPHONE: 212-757-2200
TELEPHONE: 212-757-2200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: Chang, Sandra
APPLICANT: Hi, George
APPLICANT: Barr, Philip
APPLICANT: Gibson, Helen
TITLE OF INVENTION: BACULOVIRUS PRODUCED PLASMODIUM
TITLE OF INVENTION: FALCIPARUM VACCINE
                                                                                                                                                                                             TELEPHONE: 212-757-2200
TELEFAX: 212-586-1461
INFORMATION FOR SEQ ID NO: 2:
                                                               TYPE: amino acid
STRANDEDNESS: Bing
TOPOLOGY: linear
MOLECULE TYPE: pepti
HYPOTHETICAL: NO
               ANTI-SENSE: NO
FRAGMENT TYPE: C-terminal
ORIGINAL SOURCE:
                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 394 amino acids
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CORRESPONDENCE ADDRESSES: Davis Hoxie Faithfull Hapgood
STREET: 45 Rockefeller Pl.
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ORGANISM:
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Plasmodium falciparum
                                                               peptide
NO
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; TYPE: PRT
; ORGANISM: plasmodium falciparum
US-09-500-376-2
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US-09-500-376-2
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                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: University of Hawaii
TITLE OF INVENTION: Baculovirus Produced Plasmodium Falciparum Vaccine
FILE REFERENCE: A-67984
CURRENT APPLICATION NUMBER: US/09/500,376
CURRENT FILING DATE: 2000-02-08
PRIOR FILING DATE: 1994-02-14
NUMBER OF SEQ ID NOS: 16
SOFTWARE: Patentin version 3.1
                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Description US/09500376
                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                               Query Match
Best Local Similarity
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                                                                                                                                                                     18 AISVIMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIFTFNLNLNDILNSRLKKRKY
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Similarity 98.7%;
                                                 YYEKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKTDEQKKESKFLFFLTNIETL 197
                                                                                       AISVTMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIFTFNLNLNDILNSRLKKKKY
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YNNLVNKIDDYLINLKAKINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNPYDFEAIKK 257
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                               YYEKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKTDEQKKESKFLPFLTNIETL
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                                                                                                                                                                                                               93.2%; Score 1931; DB 2;
98.7%; Pred. No. 2.4e-138;
tive 1; Mismatches 4;
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Pred. No. 2.
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nes 4;
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US-08-15-705-4

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:Sequence 4, Application US/08195705

: Patent No. 6420523
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; TYPE: PRT
; ORGANISM: plasmodium falciparum
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TITLE OF INVENTION: Baculovirus Produced Plasmodium Falciparum Vaccine
FILE REFERENCE: A-67984
CURRENT APPLICATION NUMBER: US/09/500,376
CURRENT FILING DATE: 2000-02-08
PRIOR APPLICATION NUMBER: US 08/195,705
PRIOR APPLICATION NUMBER: US 08/195,705
PRIOR FILING DATE: 1994-02-14
NUMBER OF SEQ ID NOS: 16
SOFTWARE: Patentin version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 16, Application US/09500376 Patent No. 6855316 GENERAL INFORMATION:
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Best Local Similarity
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98.1%; Pred. No. 4.1e-138;
tive 2; Mismatches 5; Indels
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US-08-195-705-4
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Best Local Similarity
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INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: per HYPOTHETICAL: NO FRAGMENT TYPE: C-1 ORIGINAL SOURCE: ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/195,705
FILING DATE: 14-FEB-1994
CLASSIFICATION: 435
CLASSIFICATION: 435
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APPLICANT: Hui, George
APPLICANT: Barr, Philip
APPLICANT: Gibson, Helen
TITLE OF INVENTION: BACCULOVIRUS PRODUCED PLASMODIUM
TITLE OF INVENTION: FALCIPARUM VACCINE
NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION: 212-757-2200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
NAME: Jacobs, Seth H
REGISTRATION NUMBER: 32140
REFERENCE/DOCKET NUMBER: 1
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MEDIUM TYPE: Floppy disk
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COUNTRY: USA
ZIP: 10111
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: amino acid
STRANDEDNESS: single
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                                                      318
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                      301
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                                       HLDEREECKCLLNYKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRKKITCECTK 377
                                                                                                           LINDDTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNISQHQCVKKQCPENSGCFR 317
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                      HLDEREECKCLLNYKQEGDKCEENPNPTCNENNGGCDADATCTEEDSGSSRKKITCECTK
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ilarity 98.4%;
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Pred. No. 1.4e-137;
0; Mismatches 6;
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; LENGTH: 394
; TYPE: PRT
; ORGANISM: plasmodium
US-09-500-376-3
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Patent No. 685316
GENERAL INFORMATION:
APPLICANT: University of Hawaii
TITLE OF INVENTION: Baculovirus Produced Plasmodium Falciparum Vaccine
FILE REFERENCE: A-67984
CURRENT APPLICATION NUMBER: US/09/500,376
CURRENT FILING DATE: 2000-02-08
PRIOR APPLICATION NUMBER: US 08/195,705
PRIOR APPLICATION NUMBER: US 08/195,705
PRIOR PILING DATE: 1994-02-14
NUMBER OF SEQ ID NOS: 16
SOFTWARE: PatentIn version 3.1
SEQ ID NO 30
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                            CORRESPONDENCE ADDRESS:
ADDRESSEE: Henry D. Coleman,
STREET: 714 Colorado Avenue
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CITY: Bridgeport
STATE: Connecticut
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US-09-117-415B-18
; Sequence 18, Application US/09117415B
; Patent No. 6551586
; GENERAL INFORMATION:
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REGISTRATION NUMBER: 32,559
REFERENCE DOCKET NUMBER: R12-030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 679-0090
TELEFAX: (212) 679-9121
INFORMATION FOR SEQ ID NO: 22:
SEQUENCE CHARACTERISTICS:
LENGTH: 613 amino acids
TYPE: amino acid
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COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: WOrdPad (ASCII)

CURRENT APPLICATION DATA:
 CORRESPONDENCE ADDRESS:
ADDRESSEE: Henry D. Coleman,
STREET: 714 Colorado Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear MOLECULE TYPE: protein SEQUENCE DESCRIPTION: SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US/09/117,415B FILING DATE: 29-Jul-1998 CLASSIFICATION: 435 ATTORNEY/AGENT INFORMATION:
                                                                                    APPLICANT: Davidson, Eugene
Yang, Shutong
TITLE OF INVENTION: Malaria Vaccine Based
                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                  313
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                                                                                                                                                                                                                                                                                                                                                    SGCFRHLDEREECKCLLNYKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRKKIT 372
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                                                                                                                                                                                                                                                                 CECTKPDSYPLFDGIFCSS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  56.3%; Score 1166.5; DB 2; 58.0%; Pred. No. 3.6e-80; tive 55; Mismatches 83;
                                                                  of a MSA1 Peptide
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LENGTH: 631 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 18:
US-09-117-415B-18
                                                                                                                                                              RESULT 14
US-09-117-415B-20
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                                      Sequence 20, Application US/09117415B
PATENT NO. 6551586
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Davidson, Eugene
APPLICANT: Davidson, Eugene
Yang, Shutong
TITLE OF INVENTION: Malaria Vaccine Based Upon the Addition
Of MINDER OF STOTEMERS. 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 220; Conserv
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TELEFAX: (212) 679-9121
INFORMATION FOR SEQ ID NO: 18:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/09/117,415B
FILING DATE: 29-Jul-1998
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARAE: WORDPA (ASCII) CURRENT APPLICATION DATA:
            NUMBER OF SEQUENCES: 24 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: COLEMAN, HENRY D.
REGISTRATION NUMBER: 32,559
REFERENCE/DOCKET NUMBER: R1:
TELECOMMUNICATION INFORMATION:
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MEDIUM TYPE: Floppy disk
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                                                                          Sequence 16, Application Patent No. 6551586 GENERAL INFORMATION:
Yang, Shutong
TITLE OF INVENTION: Malaria Vaccine Based Upon
of a MSA1 Peptide
                                         APPLICANT: Davidson, Eugene
Yang, Shutong
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US-09-117-415B-20
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: (212) 679
TELEFAX: (212) 679-9
INFORMATION FOR SEQ ID NO: 20:
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APPLICATION NUMBER: US/09/117,415B
FILING DATE: 29-Jul-1998
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: COleman, Henry D.
REGISTRATION NUMBER: 32,559
REFERENCE/DOCKET NUMBER: R12-030
TELEPHONE: (212) 679-0090
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LENGTH: 631 amino acids
TYPB: amino acid
TYPB: amino acid
TOPOLOGY: 11near
MOLECULE TYPB: protein
SEQUENCE DESCRIPTION: SEQ ID NO:
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CECTKPDSYPLFDGIFCSS 611
                            CECTKPDSYPLFDGIFCSS 391
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STREET: 714 Colorado Avenue
CITY: Bridgeport
STATE: Connecticut
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Search completed: May
Job time : 48 secs
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 56.3%; Score 1166.5; DB 2; Length 649; Best Local Similarity 58.0%; Pred. No. 3.8e-80; Matches 220; Conservative 55; Mismatches 83; Indels 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: (212) 679-0090
TELBFAX: (212) 679-9121
INFORMATION FOR SEQ ID NO: 16:
SEQUENCE CHARACTERISTICS:
LENGTH: 649 amino acids
TYPE: amino acid
TOPOLOCY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTMARE: WOTGPAd (ASCII)
CURRENT APPLICATION NUMBER: US/09/117,415B
FILING DATE: 29-Jul-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 435
ATTORNEY/AGENY INFORMATION:
NAME: COLEMAN, Henry D.
REGISTRATION NUMBER: 32,559
REFERENCE/DOCKET NUMBER: R12-030
TELECCOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Henry D. Coleman,
STREET: 714 Colorado Avenue
                                                                             611
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CITY: Bridgeport
STATE: Connecticut
COUNTRY: USA
                                                                                                          CECTKPDSYPLFDGIFCSS 391
                                                                                                                                                        SGCPRHLDEREECKCLLNYKQEGDKCVENPNPTCNENNGGCDADAKCTEEDSGSNGKKIT 610
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                                                                               CECTKPDSYPLFDGIFCSS 629
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Perfect score:
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seg length: 2000000000
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# ALIGNMENTS

RESULT 1

	A54498
	major merozoite surface antigen precursor - 'malaria parasite (Plasmodium falciparum) (isc
	C.Species: Plasmodium falciparum C.Date: 28-Oct-1994 #seomence revision 28-Oct-1994 #text change 31-Dec-2004
	R;Peterson, M.G.; Coppel, R.L.; McIntyre, P.; Langford, C.J.; Woodrow, G.; Brown, G.V.; I
	A; Title: Variation in the precursor to the major merozoite surface antigens of Plasmodium
	PMID:2449612
	A; Status: preliminary A; Molecule type: DNA
	A; Residues: 1-1701 < PETS A; Cross-references: UNIPROT: P13819; UNIPARC: UPI000012F631; GB:M19143; NID:g160412; PIDN:
cibution.	C;Keywords: surface antigen
	Query Match 93.8%; Score 1942; DB 2; Length 1701; Best Local Similarity 99.2%; Pred. No. 1.2e-93; Matches 37: Conservative of Mismarches 1: Indels 0: Gans 0:
Description	1 8
major merozoite su	
major merozoite su	Db 1308 AISVIMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIITENLNLNUTLNSKLKKKKY 1367
major merozoite su	Qy 78 FLDVLESDLMQFKHISSNEYIIEDSFKLLNSEQKNTLLKSYKYIKESVENDIKFAQEGIS 137
merozoite	Db 1368 FLDVLESDLMQFKHISSNEYIIEDSFKLLNSEQKNTLLKSYKYIKESVENDIKFAQEGIS 1427
major merozoite su	QY 138 YYEKVLAKYKDDLESIKKVIKSEKEKFPS9PPTTPPSPAKTDEQKKESKFLPFLTNIETL 197
merozoite major sur merozoite surface	Db 1428 YYEKYLAKYKDDLESIKKVIKEEKEKFPS9PPTTPPSPAKTDEQKKESKFLPFLTNIETL 1487
major merozoite su	Qy 198 YNNLVNKIDDYLINLKAKINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNPYDFEAIKK 257
	Db 1488 YNNLVNKIDDYLINLKAKINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNTNDFEAIKK 1547
hypothetical prote	QY 258 LINDDTKKDMLGKLLSTGLYQNFPNTIISKLIEGKFQDMLNISQHQCVKKQCPENSGCFR 317
repeat organellar	Db 1548 LINDDTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNISQHQCVKKQCPENSGCFR 1607
rhoptry protein -	210
chromosome assembl	
chromosome segrega conserved hypothet	Db 1608 HLDEREECKCLLNYKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRKKITCECTK 1667
hypothetical prote	Qy 378 PDSYPLEDGIFCSS 391
	Db 1668 PDSYPLEDGIFCSS 1681
nd c	
major merozoite su	RESULT 2

7.00 7.00 7.00 7.00 7.00 7.00 7.00

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major merozoite surface antigen precursor - malaria parasite N;Alternate names; 195K glycoprotein C;Species: Plasmodium falciparum C;Date: 30-Sep-1987 #sequence_revision 31-Mar-1991 #text_chan C;Accession: A23386; S06361 C;Accession: A23386; S06361 R;Weber, J.L.; Leininger, W.M.; Lyon, J.A. Nucleic Acids Res. 14, 3311-3323, 1986 A;Title: Variation in the gene encoding a major merozoite sur A;Reference number: A23386; MUID:86205236; PMID:3517809 A;Accession: A23386 A;Molecule type: DNA A;Residues: 1-1104 <WEB1>
major merozoite surface antigen precursor - malaria parasite (Plasmodium falciparum) C;Species: Plasmodium falciparum C;Species: Plasmodium falciparum C;Date: 19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change 31-Dec-2004 C;Accession: A26868 R;Tanabe, K.; Mackay, M.; Goman, M.; Scaife, J.G. Nol. Biol. 195, 273-287, 1987
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A;Rolecule type: DNA
A;Residues: 1104-1726 (WEB2)
A;Cross-references: UNIPARC:UPI0000174697; EMBL:X03831
A;Cross-references: UNIPARC:UPI0000174697; EMBL:X03831
C;Comment: The merozoite stages of different strains have strain-specific surface C;Comment: P. falciparum has three stages: sporozoite, merozoite, and gametocyte.
C;Comment: P. falciparum has three stages: sporozoite, merozoite, and gametocyte.
C;Superfamily: G surface protein
C;Keywords: glycoprotein; merozoite; surface antigen; tandem repeat
F;1-19/Domain: signal sequence #status predicted <SIG>
F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-1726/Product: major merozoite surface antigen #status predicted <MAT>
F;67-87,91-96,100-105,109-120/Region: 3-residue repeats (S-G-T)
F;757-765/Region: 3-residue repeats (T-E-E)
F;133,272,501,567,638,827,839,924,994,990,1016,1114,1221,1613,1658/Binding site:
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A;Title: Merozoite surface protein sequence from the Camp & A;Reference number: S06361; MUID:88143999; PMID:3278296
A;Accession: S06361
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Local Similarity 98.7%;
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Pred. No. 4.7e-93;
1; Mismatches 4;
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C:Keywords: surface antigen
F;1-19/Domain: signal sequence #s
F;20-1701/Product: major merozoit
                                                                                                                                                          A;Molecule type: DNA
A;Residues: 1-651 <TOL>
A;Cross-references: UNIPROT:Q25924;
A;Experimental source: strain RO-71
C;Superfamily: G surface protein
                                                                                                                                                                                                                                                                            merozoite surface antigen 1 - malaria parasite C;Species: Plasmodium falciparum A;Variety: strain RO-71 C;Date: 06-Jan-1995 #sequence_revision 26-Jul-1 C;Accession: S47282 R;Tolle, R.; Bujard, H.; Copper, J.A.
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A;Reference number: $47282
A;Accession: $47282
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                                                                                                                                                                                                                                                                   submitted to the EMBL Data Library,
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A;Residues: 1-1701 <TAN>
A;Cesidues: 1-1701 WIPARC:UPI0000177F8C
C;Superfamily: G surface protein
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Similarity 98.4%;
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98.1%;
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Pred. No. 1.5e-92;
0; Mismatches 6;
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                                                                                                                                                                                                                                                      July 1994
m: recombination
                                                                                              Mismatches
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A;Molecule type: DNA
A;Residues: 1-1726 <CHA>
A;Residues: 1-1726 <CHA>
A;Cross-references: UNIPROT:Q25922; UNIPARC:UPI0000177F89;
C;Superfamily: G surface protein
C;Keywords: surface antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Title: Plasmodium falciparum: gene structure and hydropathy profile of the major meroza;Reference number: A45948; MUID:89005525; PMID:3049134
A;Accession: A45948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Accession: A45948
R;Chang, S.P.; Kramer, K.J.; Ya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         major merozoite surface antigen precursor - malaria parasite (Pl
C;Species: Plasmodium falciparum
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change
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                                                                                                                                                          LINDDTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNISQHQCVKKQCPENSGCFR 317
                                                                                                                                                                                                                       YNNLVNKIDDYLINLKAKINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNPYDFEAIKK
                                                                                                                                                                                                                                                                   YYEKVLAKYKODLESIKKVIKEEKEKFPSSPPTTTPSPVKTDEQKKESKFLPFLTNIETL
                                                                                                                                                                                                                                                                                      YYEKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKTDEQKKESKFLPFLTNIETL 197
                                                                                                                                                                                                                                                                                                                               FLDVLESDLMQFKHISSNEYIIEDSFKLLNSEQKNTLLKSYKYIKESVENDIKFAQEGIS
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                                               PDSYPLFDGIFCSS 391
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ilarity 97.9%;
Conservative
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Pred. No. 4.6e-92;
1; Mismatches
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                                                                                                                                                                                                   major merozoite surface antigen precursor - malaria N;Alternate names: gp195 surface antigen C;Species: Plasmodium falciparum C;Date: 12-Feb-1993 #sequence_revision 12-Feb-1993 #C;Accession: S05603; S04850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            major merozoite surface antigen - malaria părasite (Plasmodium falciparum) (fra C;Species: Plasmodium falciparum C;Date: 17-Feb-1994 #sequence_revision 17-Féb-1994 #text_change 31-Dec-2004 C;Accession: A45545 R;Blackman, M.J.; Ling, I.T.; Nicholls, S.C.; Holder, A.A. Mol. Blochem. Parasitol. 49, 29-33, 1991 A;Reference number: A45545, MUID:92131048; PMID:1775158
Nucleic Acids Res. 17, 5401, 1989
A;Title: Nucleotide and deduced amino acid sequence of the
A;Reference number: S04850; MUID:89345116; PMID:2668887
A;Accession: S04850
A;Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Residues: 1-400 <BLA>
A;Cross-references: UNIPROT:Q03999; UNIPARC:UPI000007B5E4
A;Note: sequence extracted from NCBI backbone (NCBIN:77612, C;Superfamily: G surface protein C;Keywords: glycoprotein; merozoite; surface antigen; tander
                                                                                        A;Molecule type: mRNA
A;Residues: 1-1639 <MYL>
A;Cross-references: UNIPROT:P04933;
                                                                                                                                                       A;Reference number: S05603
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                                                                                                                                          A;Accession: S05603
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Best Local Similarity 58.0%;
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                                                                                                                                                                       Library,
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                                                                                            UNIPARC: UPI0000000672;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                       April 1989
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                                               gp195
                                                                                            EMBL:X15063; NID:g9896;
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PIDN:(

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Plasmo

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A;Molecule type: DNA
A;Residues: 1-1631 <MAC>
A;Cross-references: UNIPARC:UPI0000174695
A;Cross-references: UNIPARC:UPI0000174695
C;Comment: The merozoite stages of different strains have strain-specific surface C;Comment: P. falciparum has three stages: sporozoite, merozoite, and gametocyte. C;Superfamily: G surface protein
C;Superfamily: G surface protein
C;Keywords: glycoprotein; merozoite; surface antigen; tandem repeat; transmembrane
F;1-19/Domain: signal sequence #status predicted <SIG-F;20-1631/Product; major merozoite surface antigen #status predicted <MAT>
F;67-84/Region: 3-residue repeats (S-G-T/P)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Accession: A25120
R;Mackey, M.; Goman, M.; Bone, N.; Hyde, J.E.; Scaife, J.; Ce EMBO J. 4, 3823-3829, 1985
A;Title: Polymorphism of the precursor for the major surface A;Reference number: A91030; MUID:86136024; PMID:3004972
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ajor merozoite surface antigen precursor - malaria parasite (Plasmodium falciparum)
;Species: Plasmodium falciparum
;Date: 30-Sep.1987 #sequence_revision 30-Sep-1987 #text_change 31-Dec-2004
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                                                                                                                                              Query Match
Best Local Similarity
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Best Local
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hes 220;
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                                            TGEAVTPSVIDNILSKIENEYEVLYLKPLAGVYRSLKKQLENNVMTFNVNVKDILNSRFN 1311
                                                               SGTMAISVTMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIFTFNLNLNDILNSRLK
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    KRKYFLDVLESDLMQFKHISSNEYIIEDSFKLLNSEQKNTLLKSYKYIKESVENDIKFAQ 133
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                                                                                                                             58;
                                                                                                                         Score 1043; DB 1;
Pred. No. 8.5e-47;
8; Mismatches 96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1619
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                                                                                                                                                                  Length 1631;
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A;Residues: 1-1640 <HOL>
A;Cross-references: UNIPROT:P04933;
C;Superfamily: G surface protein
C;Keywords: surface antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nature 317, 270-273, 1985
A;Title: Primary structure of the precursor to the three major surface antigens of A;Reference number: A24594; MUID:86014355; PMID:2995820
A;Accession: A24594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   probable major surface antigen (83K, 19K, 42K) precursor - malaria parasite C;Species: Plasmodium falciparum C;Date: 29-Aug-1987 #sequence_revision 29-Aug-1987 #text_change 31-Dec-2004 C;Date: 29-Aug-1984 #sequence_revision 29-Aug-1987 #text_change 31-Dec-2004 C;Accession: A24594 R;Holder_A.A.; Lockyer_M.J.; Odink, K.G.; Sandhu, J.S.; Riveros-Moreno, V.
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                                                                  TCECTKPDSYPLFDGIFCSS 391
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                           TCECTKPDCYPLSMVIFCSS
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A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-1751 <GIB>
A;Cross-references: UNIPROT;Q26194; UNIPARC:UPI0000083C26; GB:M75674; NID:g160608; PID:A;Note: sequence extracted from NCBI backbone (NCBIN:83591, NCBIP:83592)
C;Superfamily: G surface protein
C;Keywords: surface antion
                                                                                                                                                                                   C;Accession: A45604
R;Gibson, H.L.; Tucker, J.E.; Kaslow, D.C.; Krettli, A.U.; Collins, W.E.; Kiefer, Mol. Biochem. Parasitol. 50, 325-333, 1992
A;Title: Structure and expression of the gene for Pv200, a major blood-stage surfa A;Reference number: A45604; MUID:92158013; PMID:1371329
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A;Residues: 1-1726 <DEL>
A;Cross-references: UNIPROT:Q02569; UNIPARC:UPI0000177F98; GB:M60807
C;Superfamily: G surface protein
C;Keywords: surface antigen
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A;Title: Primary structure of the merozoite surface antigen 1 of A;Reference number: A39401; MUID:91219506; PMID:2023952
A;Accession: A39401
A;Status: preliminary
                                                                                                                                                                                                                                                                                          major blood-stage surface antigen Pv200 - Plasmodium vivax C;Species: Plasmodium vivax
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                                                                                                                                                                                                                                                                       Date: 22-Apr-1993 #sequence_revision 18-Nov-1994 #text_change 31-Dec-2004
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 Query Match
Best Local
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Best Local Similarity 43.1%;
Matches 160; Conservative 7
 Local Similarity
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37.7%;
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Pred. No. 1.1e-33;
5; Mismatches 114;
Score
Pred.
781; DB 2;
No. 4.2e-33;
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major merozoite surface antigen - Plasmodium yoelii (fragment) (;Species: Plasmodium yoelii (;Species: Plasmodium yoelii (;Species: 30-Jun-1989 #text_change C;Accession: A28121 R;Burns Jr., JM.; Daly, T.M.; Vaidya, A.B.; Long, C.A. Proc. Natl. Acad. Sci. U.S.A. 85, 602-606, 1988 A;Title: The 3' portion of the gene for a Plasmodium yoelii mero A;Beference number: A28121; MUID:88124889; PMID:2448778 A;Accession: A28121
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A28121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Experimental source: strain 17XL A;Note: the authors translated the C;Superfamily: G surface protein C;Keywords: surface antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Molecule type: DNA
A;Residues: 1-680 <BUR>
A;Cross-references: UNIPROT:P13828; UNIPARC:UPI000016BFD4; GB:J03612;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     h 26.7%; Score 553.5; DB Similarity 30.8%; Pred. No. 1e-21;
                                                                                                                                                                   LLNSEQKNTLLKSYKYIKESVENDIKFAQEGISYYEKVLAKYKDDLESIKKVIKEEKEKF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GVKTEIKKVEDDI------KKQDEELKKLGNVNSQDSKKNEFIAKKAELEKYLPF
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                                                                                                                                                                                                                                                                                                VYRSLKKQIEKNIFTFNLNLNDILNSRLKKRKYFLDVLESDLMQFKHISSNEYIIEDSFK 104
  KAEFEILTKNIEKYIQIDEKLDEFVEHAE - - -
                                     KDEAHVKITKLSDLKAIDDKIDLFKNPYDFEAIKKLINDDTKKDMLGKLLSTGLV-QNFP
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                                                                                                                             PSSPPTTPPSPAKTDEQKKE--SKFLPFLTNIETLYNNLVNKIDDYLINLKAKINDCNVE
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                                                                                    AETNOTNKEEKKKY I PILEDLKGLYETVI GQAEEYSEELQNRLDNYKNE
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A; Molecule type: DNA
A; Residues: 1-1772 <LEW>
A; Residues: 1-1772 <LEW>
A; Cross-references: UNIPROT: Pl3828; UNIPARC: UPI000012F636; GB: J04668; NID: g160492;
A; Cross-references: UNIPROT: Long, C.A.
Mol. Biochem. Parasitol. 36, 283-285, 1989
A; Title: Precursor to the major merozoite surface antigen of Plasmodium yoelii: clc
A; Reference number: A45531; MUID: 90014982; PMID: 2797064
A; Accession: A45531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Title: Cloning and analysis of the gene encoding the 230-kilodalton merozoite surface A;Reference number: A45532; MUID:90014981; PMID:2797063
A;Accession: A45532
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  major merozoite
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A; Residues: 454-1094 <DAL>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LLNSEQKNTLLKSYKYIKESVENDIKFAQEGISYYEKVLAKYKDDLESIKKVIKEEKEKF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VYRSIKKQIEKNIFTFNININDIINSRIKKRKYFLDVLESDIMQFKHISSNEYIIEDSFK 104
                                                                                                                                         VENPNPTCNENNGGCDADATCTEEDSGSSRKKITCECTKPDSYPLFDGIFCSS 391
                                                                                                                                                                                    KKÍLAKMLNMDGMDLLGVDPKHVCVDTRDIPKNAGCPRDDNGTEEWRCLLGYKKGEGNTC
                                                                                                                                                                                                                      NTIISKLIEGKFQDMLNIS-QHQCV-KKQCPENSGCFRHLDEREECKCLLNYKQ-EGDKC 338
                                                                                                                                                                                                                                                                                                        KDEAHVKITKLSDLKAIDDKIDLFKNPYDFEAIKKLINDDTKKDMLGKLLSTGLV-QNFP 281
                                                                                                                                                                                                                                                                                                                                                 -----AETNDTNKEEKKKYIPILEDLKGLYETVIGQAEEYSEELQNRLDNYKNE
                                                                                                                                                                                                                                                                                                                                                                                     PSSPPTTPPSPAKTDEQKKE--SKFLPFLTNIETLYNNLVNKIDDYLINLKAKINDCNVE 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PGAVPGSGTDTRVAGSSVDDNEDDDIYQIASGQSEDAPEKDILSEFTNESLYVYTKRLGS 1420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KKILAKMLNMDGMDLLGVDPKHVCVDTRDIPKNAGČFRDDNGTEEWRČLLGYKKGEGNTČ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NTIISKLIEGKFQDMLNIS-QHQCV-KKQCPENSGCFRHLDEREECKCLLNYKQ-EGDKC
                                                                                                                                                                                                                                                                  KAEFEILTKNLEKYIQIDEKLDEFVEHAE-----NNKHIASIALNNLNKSGLVGEGES 1639
                                                                                                                                                                                                                                                                                                                                                                                                                                 LLDNDKKDKQIVNLKYATKGINEDIETTTDGIKFFNKMVELYNTQLAAVKEQIATIE---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PG---GSGSGTMAISVTMD----------NILSGFENEYDVIYLKPLAG
                                                                                                   VENNNPTCDINNGGCDPTASCQNAESTENSKKIICTCKEPTPNAYYEGVFCSS 1752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VENNNPTCDINNGGCDPTASCQNAESTENSKKIICTCKEPTPNAYYEGVFCSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VENPNPTCNENNGGCDADATCTEEDSGSSRKKITCECTKPDSYPLFDGIFCSS 391
  surface
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
antigen
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precursor -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 553.5; DB 2
Pred. No. 3.1e-21;
8; Mismatches 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-Jun-1993
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  Plasmodium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               147;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #text_change 31-Dec-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 1772;
  chabaudi chabaudi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            51;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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Matches

: Local Sim

Similarity

Conservative

140;

Indels 111;

Gaps

23;

-FTFNLNLNDIL---NSRLKK 74

ENEYDVIYLKPLAGVYRSLKKQIEKNI-----

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R;Gardner, M.J.; Tettelin, H.; Carucci, D.J.; Cummings, L.M.; Aravind, L.; Koonin, E.V.; Pertea, M.; Salzberg, S.; Zhou, L.; Sutton, G.G.; Clayton, R.; White, O.; Smith, H.O.; Science 282, 1126-1122, 1998
A;Title: Chromosome 2 sequence of the human malaria parasite Plasmodium falciparum.
A;Reference number: A71600; MUID:99021743; PMID:9804551
A;Accession: E71606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mol. Biochem. Parasitol. 43, 231-244, 1990
A/Title: Molecular cloning and sequence analysis of the gene encoding the major merozoite A;Reference number: A45546; MUID:91218805; PMID:2090945
A;Accession: A45546
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                   hypothetical protein PFB0765w - malaria parabite (Plasmodium falciparum)
C;Species: Plasmodium falciparum
C;Date: 13-Nov-1998 #sequence_revision 13-Nov-1998 #text_change 31-Dec-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C;Accession: A45546
R;Deleersnijder, W.; Hendrix, D.; Bendahman, N.; Hanegreefs,
                                                                                                                                                                            A;Residues: 1-980 <GAR>
A;Cross-references: UNIPROT:Q8I659;
                                                                                                                                                                                                                        A;Status: preliminary; nucleic acid
A;Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: mRNA
A; Residues: 1-1785 < DEL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: UNIPROT:Q25685; UNIPARC:UPI000007B6DB; GB:M34947; NID:g160597;
                                                                                                                                                 A; Experimental source: clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004;Accession: A45546
                                  Query Match
Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Species: Plasmodium chabaudi chabaudi
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1415 DILDAFKSENEYIYTKSLGNTYKSFKKHMLKE---FSMIKEDIMTGLNYKLEKRNDFLDV 1471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      82
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                                                                                                                                                                                                                                                                                                                                                                                                                 E71606
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VNKIDDYLINLKAKINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNPYDFEAIKKLIND 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKTDEQKKESKFLPFLTNIETLYNNL 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LESDIMOFKHISSNEYIIEDSFKLINSEQKNTLLKSYKYIKESVENDIKFAQEGISYYEK 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEREECKCLLNYKQ--EGDKCVENPNPTCNENNGGCDADATCTEEDS--GSSRKKITCEC 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DTKKDMLGKLLSTGLV-QNFPNTIISKLIEGKFQDMLNI-SQHQCVKKQCPENSGCFRHL 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TKPDSYPLFDGIFCSS 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DGTEEWRCLLGFKKDDDGNRCVADDAPVCNNNNGGCDKNADCREVENTDRDPSKKIVCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HIASIALNNINKSGIVTEGESKKILAKMINMDAMDLIGIGSNHVCISTSTPDNAGCFRYD 1689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LNGAEEFSELLQHKLENYKIEKAGFDILMANLETYIRIDEKLEDF-----VESAEK--NK 1629
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8.7%; bre
23.7%; Pre
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; Pred. No. 4.6e-20;
86; Mismatches 134
         Score 180.5; DB Pred. No. 0.043; 7; Mismatches 1
                                                                                                                                                                               UNIPARC: UPI00001788F1;
                                                                                                                                                                                                                                                 sequence
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                                                           Length
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                                                                                                                                                                               GB:AE001417; GB:AE001362; NID:
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;
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                                                                                                                                                                                                                                                      not
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Qy Db Searc	용 성	8 8	B 8	B 8	음 성	유 성	рь
Qy 363 DSGSSRKKIT 372 :     :   Db 645 QAKINNKKLT 654 Search completed: May 5, 2006, 00:25:18 Job time: 41 secs	Qy 312 NSGCFRHLDER-EECKCLLNYKQEGDKCVENPNPTCNENNGGCDADATCTEE 362	Qy 265KDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNISQHQCVKKQCPE 311	Qy 206 DDYLINLKAKINDC-NVEKDEAHVKITKLSDLKAIDDKIDLFKNPYDFEAIKKLINDDTK 264	Qy 156VIKEEKEKFPSSPPTTPPSPAKTDEQKKESKFLPFLTNIETLYN-NLVNKI	QY 105 LLNSEQKNTLL-KSYKYIKESVENDIKFAQEGISYYEKVLAKYKDDLESIKK 155	Qy 75 RKYFLDVLESDLMQPKHISSNEYIIEDSFK 104 :	Db 248 QNYYYLKKEYDLKNKBLEKNIEHGKKLEHELSHCYEENQKLNEEIKRRNSFIKN 301
	GDKCVENPNPTCNENNGGCDADATCTEE 362	KFQDMLNISQHQCVKKQCPE 311	KAIDDKIDLFKNPYDFEAIKKLINDDTK 264 	KKESKFLPFLTNIETLYN-NLVNKI 205 	ISYYEKVLAKYKDDLESIKK 155 :   :   :  :   LLEKKKCIENLKDELINIKKKMEDKWHM 421	SNEYIIEDSFK 104	LEHELSHCYEENQKLNEEIKRRNSFIKN 301

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Result
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Perfect score:
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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    310330
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   Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         seq length: 0 seq length: 2000000000
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1: uniprot_sprot:*
2: uniprot_trembl:*
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Gapop 10.0 , Gapext 0.5
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2071
1 MAHHHHHHPGGSGSGTWAIS.....TCECTKPDSYPLFDGIFCSS
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      GenCore version 5.1.7
(c) 1993 - 2006 Biocceleration Ltd.
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Q9TYG2 PLAFA
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	VTMDNILS	larity Conservat	20 AA;	ozoite;	MSP1_	010901;	006209;	O; C:mei	1607-16	A45948.	y). CAA845!	Parasi	m/061d5	R., Bu	JOE - Dal	SECTIONS	race and 1. 81:4	alcipar	793; Pul	SEQUENCE.	00,	Alveolata;	SA1/ MS	the maj	Tremble	TYEMBI.Y	PRELIMINARY			∞ ⊢	 				2.0	. i. i	ົມເພ
	GFENEY	94.9% 100.0 tive	19572	Repea	C; 1.	MS P1	EGF	mbrane	99.		56.1:	TION:	sequer	Bujard H	2		cagen- 7-54 (1	iparum: vai	PubMed=7			ď	`	_ ·	el. 01		NARY;		72	72	4 6	94	94	88	569 2	000	6 D
	DVIYLKPLAGVYRSLKKQIEKNIF	Score 1965; DB 2; L Pred. No. 1.3e-90; 0; Mismatches 0;	MW; 717B2FD1E637A8A3	Signal. Potential	2		0 1	P H			-: Genomic DNA.	73:241-244(1995). Attached to the membrane	ng strategy for the Pl	7327 501-10:10:1070100	7333. DOT-10 1016/0166			ciations within the C-te	328566; DOI=10.1006/expr			icomplexa; Haemosporida; P	Α,	ozoite surface antigens	, Last sequence update)	Created)	PRT; 1720 AA.	ALIGNMENTS	043997	Q25726	Q9TZT4	Q9TZT5 Q764L3	Q9NHX1	Q25969 0764L0	2 Q25979_PLAFA 2 Q25977_PLAFA	025974	Q25924_ Q25975_
EGIS 137	TENLINLNDILNSRLKKRKY 77	ength 1720; Indels 0; Gaps 0;	CRC64;									by a GPI-anchor (By	asmodium raiciparum		-6851 (95) 00094-H			rminal region of	.1995.1091;			lasmodium.		precursor.					43997 ]	25726	9tzt4	9tzt5   76413	9nhx1 plasmod	25969 p 76410 p	plasmod	25974 plasmodi	Q25924 plasmodium Q25975 plasmodium

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RA Hall N., Pain A., Berriman M., Churcher C., Harris B., Harris D.,
RA Mungall K., Bowman S., Atkin R., Baker S., Barron A., Brooks K.,
RA Mungall K., Bowman S., Atkin R., Baker S., Barron A., Brooks K.,
RA Mungall K., Bowman S., Atkin R., Baker S., Barron A., Brooks K.,
RA Chillingworth T., Christodoulou Z., Clark L., Clark R., Corton C.,
RA Cronin A., Davies R., Davis P., Dear P., Dearden F., Doggett J.,
RA Cronin A., Davies R., Davis P., Dear P., Dearden F., Doggett J.,
RA Cronin A., Davies R., Davis P., Dear P., Dearden F., Doggett J.,
RA Harper D., Hauser H., Hornsby T., Holroyd S., Horrocks P.,
RA Harper D., Hauser H., Hornsby T., Holroyd S., Horrocks P.,
RA Humphray S., Jagels K., James K.D., Johnson D., Kerhornou A.,
RA Humphray S., Jagels K., James K.D., Johnson D., Lennard N.,
RA Knights A., Konfortov B., Kyes S., Larke N., Lawson D., Lennard N.,
RA Line A., Maddison M., Mclean J., Mooney P., Moule S., Murphy L.,
RA Cliver K., Ormond D., Price C., Quail M.A., Rabbinowitsch E.,
RA Rajandream M.A., Rutter S., Rutherford K.M., Sanders M., Simmonds M.,
RA Seeger K., Sharp S., Smith R., Squares R., Squares S., Stevens K.,
RA Sandream M.A., Rutter S., Smith R., Squares S., Stevens K.,
RA Sulston J.E., Craig A., Newbold C., Barrell B.G.,
"Sequence of plasmodium falciparum chromosomes 1, 3-9 and 13.";
RI Neture 419:527-531(2002).
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Plasmodium falciparum (isolate 3D7).
Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
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01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
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Q810U8;
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Pfam; PF07462; MSP1_C; 1.
Membrane; Merozoite; RepeseQUENCE 1720 AA; 1957
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                                                                                                                                                                                                                                        GO; GO:0016020; C:membrane; IEA.
GO; GO:0009405; P:pathogenesis; IEA.
InterPro; IPR006209; EGF like.
InterPro; IPR010901; MSPI_C.
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   Conservative
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94.9%; Score 1965; DB 2; Length 1720;
100.0%; Pred. No. 1.3e-90;
Live 0; Mismatches 0; Indels 0
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01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Merozoite surface antigen 1 (Fragment).
Name=gp190; Synonyms=MSA1, MSP1, PMMSA;
Plasmodium falciparum.
Plasmodiata; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
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PLAFA
QZ5923_PLAFA PRELIMINARY;
Q25923;
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NON_TER 1
SEQUENCE 652 AA;
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GO; GO:0016020; C:membrane; IEA.
GO; GO:0009405; P:pathogenesis;
InterPro; IPR006209; EGF like.
InterPro; IPR010901; MSPI_C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; Z35328; CAA84557.1; -; Genomic_DNA. HSSP; P04933; 1CEJ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            merozoite surface antigen-1."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=95354793; PubMed=7628566; DOI=10.1006/expr.1995
Tolle R., Bujard H., Cooper J.A.;
"Plasmodium falciparum: variations within the C-terminal
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                                                                                                                                                                                                                                                                                                  Pfam; PF00008; EGF; 1.
Pfam; PF07462; MSP1_C; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                similarity)
                                                                                                                                                                          Similarity
                                                                AISVIMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIFTFNLNLNDILNSRLKKRKY 77
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LINDDTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNISQHQCVKKQCPENSGCFR 317
FLDVLESDLMQFKHISSNEYIIEDSFKLLNSEQKVTLLKSYKYIKESVENDIKFAQEGIS
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ilarity 99.7%;
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                                                                                                                                                    Score 1961; DB 2; Length Pred. No. 7.3e-91; 1; Mismatches 0; Indels
                                                                                                                                                                                                                                          2B6A87737B490A62 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 369; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GO; GO:0016020; C:membrane; IEA.
GO; GO:0009405; P:pathogenesis; IE
InterPro; IPR006209; EGF like.
InterPro; IPR010901; MSPI_C.
Pfam; PF00008; EGF; 1.
Pfam; PF07462; MSPI_C; 1.
Membrane; Merozoite.
NON TER 373 373
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Shi Y.-P., Alpers M.P., Pov
Submitted (FEB-1995) to the
-i- SUBCELLULAR LOCATION: A
similarity).
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Plasmodium falciparum.
Eukaryota; Alveolata;
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HSSP; Q25976; 10B1.
SMR; Q25723; 281-373.
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373 /
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the EMBL/GenBank/DDBJ databases.
N: Attached to the membrane by a GPI-anchor (B:
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Best Local S
Matches 371
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SMR; Q9TYG2; 457-549.

GO; GO:0016020; C:membrane; IEA.

GO; GO:0009405; P:pathogenesis; II

InterPro; IPR016209; EGF like.

InterPro; IPR010901; MSP1_C.

Pfam; PF00008; EGF; 1.

Pfam; PF07462; MSP1_C; 1.
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HSSP; P04933; 1CEJ.
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Tanabe K., Mackay M., Goman M., Scaife
"Allelic dimorphism in a surface antige
Plasmodium falciparum.";
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Ol-MAY-2000 (TrEMBLrel. 13, Last sequence update)
Ol-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Major merozoite surface protein (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9TYG2_PLAFA
Q9TYG2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDIINE-93295445; PubMed-8515786; DOI=10.1016/0166-6851(93)90010-U; Jongwultiwes S., Tanabe K., Kanbara H.; "Sequence conservation in the C-terminal part of the precursor to temporary to the conservation of the gradient formation of the procursor of the process of the process
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Plasmodium falciparum
Eukaryota; Alveolata;
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FLDVLESDLMQFKHISSNEYIIEDSFKLLNSEQKNTLLKSYKYIKESVENDIKFAQEGIS
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                                        YYEKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKTDEQKKESKFLPFLTNIETL
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Pred. No. 5.7e-90;
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Best Local S
Matches 371
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GO; GO:0016020; C:membrane; IEA.
GO; GO:0009405; P:pathogenesis; IE
InterPro; IPR0106209; EGF like.
InterPro; IPR010901; MSPI_C.
Pfam; PF07062; MSPI_C; 1.
Pfam; PF07462; MSPI_C; 1.
Membrane; Merozoite.

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                                                                                                                                                                                                                                                                                                                                                                                                                              Name=MSP1;
Plasmodium falciparum.
Eukaryota; Alveolata; A
NCBI TaxID=5833;
                                                                                                                                                                                                                                                                                                                                                             MEDLINE=93293445; PubMed=8515786; DOI=10.1016/0166-6851(93)90010-U; Jongwutiwes 3., Tanabe K., Kanbara H.; "Sequence conservation in the C-terminal part of the precursor to the major merozoite surface proteins (MSP1) of Plasmodium falciparum frifield isolates.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-NOV-1996 (TrEMBLrel. 26, Last annotation update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Major merozoite surface protein (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UT 6
58 PLAFA
025968 PLAFA PRELIMINARY;
025968;
                                                                                                                                                                                                                                                                                                                EMBL; D13345; BAA02606.1; -; Genomic_DNA HSSP; P04933; 1CEJ.
                                                                                                                                                                                                                   SEQUENCE
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                                                                                                           FLDVLESDLMQFKHISSNEYIIEDSFKLLNSEQKWTLLKSYKYIKESVENDIKFAQEGIS 137
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    LINDDTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNISQHQCVKKQCPENSGCFR
                     YNNLVNKIDDYLINLKAKINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNPYDFEAIKK 257
                                                                   YYEKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKTDEQKKESKFLPFLTNIETL
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nilarity 99.2%;
Conservative (
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                                                                                                                                                                           Score 1942; DB 2; Length 570 Pred. No. 5.7e-90; 0; Mismatches 3; Indels
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Query Match
Best Local Sim
Matches 371;
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HSSP; Q25659; 1B9W.
SMR; Q764L1; 1581-1673.
GO; GO:0016020; C:membrane; IEA.
GO; GO:0009405; P:pathogenesis; IEA.
InterPro; IPR010901; MSPI_C.
Pfam; PF00008; EGF; 1.
Pfam; PF007462; MSPI_C, 1.
Membrane; Merozoite; Repeat.
SEQUENCE 1694 AA; 193467 MW; 661419924EE7
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Q764L1;
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Tanabe K., Sakihama N., Kaneko A.;

"Stable SNPsin Malaria Antigen Genes in Isolated Pc
Science 303:493-493(2004).

-!- SUBCELLULAR LOCATION: Attached to the membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Plasmodium falciparum.
Eukaryota; Alveolata; Apicomplexa;
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05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
Merozoite surface protein 1.
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71; Conservative
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                                                          HLDEREECKCLLNYKQEGDKCVENPNPTCNENNGGCDADATCTBEDSGSSRKKITCECTK
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99.2%; Pred. No. 1.9e-89;
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01-JAN-1990 (Rel. 1
10-MAY-2005 (Rel. 4
Merozoite surface I
(PMMSA).
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"Variation in the precursor to the major merozoite surface antige:
Plasmodium falciparum.";
MOl. Biochem. Parasitol. 27:291-302(1988).
-!- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-ancho
-!- PTM: Merozoite surface antigen contain the sequence of 83 kDa
kDa and 19 kDa antigens which are the major surface antigens
kDa and 19 kDa antigens take place during schizont.
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Pfam; PF07462; MSP1_C; 1.
Glycoprotein; GPI-anchor; Lipoprotein; Malaria; Membrane;
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HSSP; P04933; 1CEJ.
SMR; P13819; 1588-1680.
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P13819;
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InterPro; IPR010901; MSPI_C.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-88142999; PubMed=2449612; DOI=10.1016/0166-6851(88)90049-7; Peterson M.G., Coppel R.L., McIntyre P., Langford C.J., Woodrow G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plasmodium falciparum
Eukaryota; Alveolata;
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                           AISVTMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIFTFNLNLNDILNSRLKKRKY 77
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05-JUL-2004 (Rel. 44, Last sequence update)
10-MAY-2005 (Rel. 47, Last annotation updat
Merozoite surface protein 1 precursor (Mero
(PMMSA) (P190).
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P08569;
EMBL; X05624; CAA29112.2; -; G
HSSP; P04933; 1CEJ.
SMR; P08569; 1588-1680.
InterPro; IPR006209; EGF_like.
InterPro; IPR010901; MSPI_C.
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                                                                                                                                                                                                                                                                     This
                                                                                                                                                                                                                                                                                                                                                                                               "Polymorphism of the precursor for the major surface antigens plasmodium falciparum merozoites: studies at the genetic level EMBO J. 4:3823-3829(1985).

-I- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=88011243; PubMed=3079521;
Tanabe K., Mackay M., Goman M., Scaife
"Allelic dimorphism in a surface antige
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Plasmodium falciparum
Eukaryota; Alveolata;
NCBI_TaxID=70153;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stunnenberg H., Bujard H.; "Polymorphism of the precursor for the
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Merozolte surface protein 1, 4
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N-linked (GlcNAC...) (Pote
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100732; AAA62223.1; -; Genome MSSp; Q25976; 1081.

SMR; Q25727; 281-373.

G0; G0:0016020; C:membrane; IEA.
G0; G0:0009405; P:pathogenesis; II
InterPro; IPR006209; EGF_like.
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GO; GO:0016020; C:membrane; IEA.
GO; GO:0009405; P:pathogenesis; I:
InterPro; IPR006209; EGF like.
InterPro; IPR010901; MSPI_C.
Pfam; PF000008; EGF; 1.
Pfam; PF07462; MSPI_C:
Membrane; Merozoite.
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-i- SUBCELLULAR LOCATION:
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Eukaryota; Alveolata;
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Pfam; PF00008; EGF; Pfam; PF07462; MSP1

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Best Local
EMBL; D13351; BAA02612.1; -; Ger HSSP; P0493; 1CEJ.
SMR; Q25978; 465-548.
GO; GO:0016020; C:membrane; IEA.
GO; GO:009405; P:pathogenesis; InterPro; IPR006209; EGF like.
InterPro; IPR010901; MSPI_C.
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Pfam; PF07462; MSPI_C; 1.
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78 PLAFA
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Plasmodium falciparum.
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field
                                                                                                                                                                                                                                                                                                      MEDLINE=93295445; PubMed=8515786; DOI=10.1016/0166-6851(93)90010-U; Jongwutiwes S., Tanabe K., Kanbara H.; "Sequence conservation in the C-terminal part of the precursor to t
                                                                                                                                                                                                                                                                                                                                                                 NUCLEOTIDE SEQUENCE
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Best Local S
Matches 371
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MEDLINE=86205236; PubMed=3517809;
Weber J.L., Leininger W.M., Lyon J.A.;
"Variation in the gene encoding a major merozoite ithe human malaria parasite Plasmodium falciparum."
Nucleic Acids Res. 14:3311-3323(1986).
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01-MAR-1989 (Rel. 10, Last sequence update)
10-MAY-2005 (Rel. 47, Last annotation update)
Merozoite surface protein 1 precursor (Merozoite (PMMSA) (P195).
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MEDLINE=88143999; PubMed=3278296;
Weber J.L., Sim B.K.L., Lyon J.A., Wolff R.;
Weber J.L., Wolf R.;
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                                  s Swiss-Prot entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation European Bioinformatics Institute. There are no restrictions on it as long as its content is in no way modified and this statement is no
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Apicomplexa; Haemosporida;
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Pred. No. 1.7e-89;
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RESULT 14

MSP1 PLAF3 STAN

MSP1 PLAF3 STAN

DT 01-FEB-1991 (Rel. 1

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InterPro; IPR010901; MSPI_C.
Pfam; PF000009; EGF; 1.
Pfam; PF07462; MSPI_C; 1.
Glycoprotein; GPI-anchor; Lipoprotein;
Polyprotein; Repeat; Signal.
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PIR; ;
HSSP;
SMR; ;
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, A23386; SAZQGN
, P04933/ 1CEJ
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                                                                                                            PDSYPLFDGIFCSS 1706
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            17, Created)
35, Last sequence update)
47, Last annotation update)
protein 1 precursor (Merozoite
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N-linked (GlCNAc.
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YYEKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKTDEQKKESKFLPFLTNIETL

FLDVLESDLMQFKHISSNEYIIEDSFKLLNSEQKNTLLKSYKYIKESVENDIKFAQEGIS

FLDVLESDLMQFKHISSNEYIIEDSFKLLNSEQKNTLLKSYKYIKESVENDIKFAQEGIS

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Query Match
Best Local S
Matches 369
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InterPro; IPR016209; EGF like.
InterPro; IPR016209; EGF C.
Pfam; PF070462; MSP1_C.
Pfam; PF070462; MSP1_C; 1.
Pfam; PF07462; MSP1_C; 1.
Glycoprotein; GPI-anchor; Lipopx P04) Protyprotein; Repeat; Signal.
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Plasmodium falciparum (
Eukaryota; Alveolata; A
NCBI TaxID=5834;
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MEDLINE=99354793; PubMed=7628566; DOI=10.1006/expr.1995.1091;

Tolle R., Bujard H., Cooper J.A.;

Tolle Responsive functions within the C-terminal region of merozoite surface antigen-1.";

Exp. Parasitol. 81:47-54(1995).

-i- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor.

-i- PTM: Nerozoite surface antigen contain the sequence of 83 kDa, 4 kDa and 19 kDa antigens which are the major surface antigens of merozoites. The maturation take place during schizont.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUCLEOTIDE SEQUENCE OF 1-1061.
MEDLINE-8816657; PubMed=327688;
Certa U., Rotmann D., Matile H., Reber-l
"A naturally occurring gene encoding the
precursor p190 of Plasmodium falciparum
EMBO J. 6:4137-4142(1987).
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Removed in mature form (By signature form the serine (Form the serine form)

GPI-anchor amidated serine (Form the serine)

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Pred. No. 7.1e-89;
2; Mismatches 2;
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exa; Haemosporida; Plasmodium.
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GO; GO:0009405; P:pathogenesis; IEA.
InterPro; IPR006209; EGF like.
InterPro; IPR010901; MSPI_C.
Pfam; PF07062; MSPI_C;
Pfam; PF070462; MSPI_C; 1.
Membrane; Merozoite.
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01-UUN-1998 (TrEMBLrel. 06, La
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Merozoite surface protein-1 ()
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HSSP; Q25976; 10B1.
SMR; Q43996; 281-373.
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MEDLINE=98319411; PubMed=9657329; DOI=10.1016/S0166-6851(98)00010-3;
Qari_S.H., Shi Y.P., Goldman I.F., Nahlen B.L., Tibayrenc M.,
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Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
NCBI_TaxID=5833;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           surface protein-1 (MSP-1), a potential malaria vaccine antigen.";
Mol. Biochem. Parasitol. 92:241-252(1998).
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"Predicted and observed alleles of Plasmodium falciparum merozoite";
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Search completed: May 5, 2006, 00:24:32 Job time : 233 secs

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Result
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re greater than or equal to the score of the result being printed,
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US-10-052-809-2

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                       DKIDLFKNPYDFEAIKKLINDDTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNIS
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Sequence 5, Appli	Sequence 11, Appl	Sequence 11, Appl	Sequence 10, Appl	•	Sequence 9, Appli	Sequence 9, Appli	Sequence 8, Appli	•	Sequence 8, Appli	Sequence 8, Appli	Sequence 11, Appl	Sequence 34, Appl	Sequence 2, Appli	Sequence 3, Appli	$\tilde{}$	Sequence 5, Appli	Sequence 7, Appli

ALIGNMENTS

#### APPLICANT: Lyon, Jeffrey A. APPLICANT: Angov, Evelina TITLE OF INVENTION: Isolation and Purification of TITLE OF INVENTION: Procein-142 Vaccine FILE REFERENCE: 003/241/SAP CURRENT APPLICATION NUMBER: US/10/057,531A CURRENT FILING DATE: 2002-01-25 PRIOR APPLICATION NUMBER: US 60/264,535 PRIOR FILING DATE: 2001-01-26 PRIOR FILING DATE: 2001-10-26 ANDMER OF SEQ ID NOS: 12 SOFTWARE: Apple Macintosh Microsoft Word 6.0 SEQ ID NO 7 LENGTH: 391 US-10-057-531A-7 Sequence 7, Application US/10057531A Publication No. US20030161838A1 GENERAL INFORMATION: TYPE: PRT ORGANISM: Artificial sequence FEATURE: OTHER INFORMATION: E. coli expressed P. falciparum MSP-142 (3D7) 100.0%; Score 2071; DB 4; Pred. No. 2.1e-126; S. Length falciparum

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Mismatches

0,

Indels

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Gaps

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240 240 180 180 120 120 60

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APPLICANT: Lyon, Jeffrey A.
APPLICANT: Angov, Evelina
APPLICANT: Cohen, Joe D.
APPLICANT: Voss, Gerald
TITLE OF INVENTION: Recombinant P. falciparum Merozoite Protein-142 Vaccine
FILE REFERENCE: 003/338/SAP
CURRENT APPLICATION NUMBER: US/10/057,532A
CURRENT FILING DATE: 2001-01-25
PRIOR FILING DATE: 2001-01-25
PRIOR FILING DATE: 000-01-26
PRIOR APPLICATION NUMBER: US 60/264,535
PRIOR APPLICATION NUMBER: US 60/347,564
PRIOR APPLICATION NUMBER: US 60/347,564
PRIOR APPLICATION NUMBER: US 60/347,564
PRIOR FILING DATE: 2001-10-26
SOFTWARE: Apple Macintosh Microsoft Word 6.0
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Sequence 3, Application US/10057531A Publication No. US20030161838A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 100.0%; Score 2071; DB 4; Best Local Similarity 100.0%; Pred. No. 2.1e-126; Matches 391; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 7, Application US/10057532A Publication No. US20030161839A1 GENERAL INFORMATION:
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ORGANISM: Artificial sequence
FEATURE:
                                                                                                                                                  361
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GENERAL IMFORMATION.

APPLICANT: Lyon, Jeffrey A.

APPLICANT: Angov, Evelina

APPLICANT: Cohen, Joe D.

APPLICANT: Voss, Gerald

TITLE OF INVENTION: Recombinant P. falciparum Mei

FILE REFERENCE: 003/238/Sap

CURRENT APPLICATION NUMBER: US/10/057,532A

CURRENT FILING DATE: 2001-01-25

PRIOR APPLICATION NUMBER: US 60/264,535

PRIOR APPLICATION NUMBER: US 60/264,535

PRIOR APPLICATION NUMBER: US 60/264,535

PRIOR FILING DATE: 2001-01-26

PRIOR FILING DATE: 2001-01-26

PRIOR FILING DATE: 2001-01-26
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US-10-057-531A-3
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                                                                                                                                                                                                                                                                  Sequence 3, Application US/10057532A Publication No. US20030161839A1
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Best Local Similarity
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APPLICANT: Lyon, Jeffrey A.
APPLICANT: Angov, Evelina
APPLICANT: Angov, Evelina
APPLICANT: Holation and Purification of P. falciparum Merozoite
TITLE OF INVENTION: Frotein-142 Vaccine
FILE REFERENCE: 003/241/SAP
CURRENT FAPLICATION NUMBER: US/10/057,531A
CURRENT FILING DATE: 2002-01-25
PRIOR APPLICATION NUMBER: US 60/264,535
PRIOR FILING DATE: 2001-01-26
PRIOR FILING DATE: 2001-10-26
PRIOR FILING DATE: 2001-10-26
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Apple Macintosh Microsoft Word 6.0
SEQ ID NO 3
SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
ORGANISM: Artificial sequence
FEATURE:
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Pred. No. 2.3e-125;
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FILE REFERENCE: 003/241/SAP
CURRENT APPLICATION NUMBER: US/10/057,531A
CURRENT FILLING DATE: 2002-01-25
PRIOR APPLICATION NUMBER: US 60/264,535
PRIOR FILING DATE: 2001-01-26
PRIOR APPLICATION NUMBER: US 60/347,564
PRIOR FILING DATE: 2001-10-26
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Apple Macintosh Microsoft Word 6.0
SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: E. coli ex
US-10-057-532A-3
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                                                           ; OTHER INFORMATION: ; OTHER INFORMATION: US-10-057-531A-2
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Publication No. US20030161838A1
GENERAL INFORMATION:
APPLICANT: Lyon, Jeffrey A.
APPLICANT: Angov, Evelina
TITLE OF INVENTION: Isolation and Purification
TITLE OF INVENTION: Protein-142 Vaccine
 Query Match
Best Local Similarity
Matches 385; Conser
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SOFTWARE: Apple Macintosh Microsoft Word
SEQ ID NO 3
LENGTH: 393
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Best Local Similarity
                                                                                                      LENGTH: 431
TYPE: PRT
ORGANISM: Artificial sequence
FEATURE:
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97.0%;
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Conservative
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 Score 2008.5; DB 4; pred. No. 2.7e-122; 0; Mismatches 4;
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Pred. No. 2.3e-125;
0; Mismatches 1;
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                              Length
                                                                                           (3D7)
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 41;
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                                                                                            Protein
Gaps
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CURRENT APPLICATION NUMBER: US/10/057,532A
CURRENT FILING DATE: 2001-01-25
PRIOR APPLICATION NUMBER: US 60/264,535
PRIOR FILING DATE: 2001-01-26
PRIOR APPLICATION NUMBER: US 60/347,564
PRIOR FILING DATE: 2001-10-26
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Apple Macintosh Microsoft Word 6.0
SEQ ID NO 2
SEQ ID NO 2
                                                                                                                                                                           ; OTHER INFORMATION: E. coli expressed P. falciparum MSP142 (3D7) Protein Sequence; OTHER INFORMATION: pET(50)MSP1-42
US-10-057-532A-2
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US-10-057-532A-2
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Publication No. US20030161839A1
GENERAL INFORMATION:
APPLICANT: Lyon, Jeffrey A.
APPLICANT: Angov, Evelina
APPLICANT: Cohen, Joe D.
APPLICANT: Voss, Gerall
TITLE OF INVENTION: Recombinant P. falciparum
FILE REFERENCE: 003/238/SAP
                                                                                                                               Query Match
Best Local
                                                                                                                   Matches
                                                                                                                                                                                                                        TYPE: PRT
ORGANISM: Artificial
FEATURE:
                                                                                                                                                                                                                                                                       LENGTH: 431
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            TMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIFTFNLNLNDILNSRLKKRKYFLDV 81
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TMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIFTFNLNLNDILNSRLKKRKYFLDV
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                                                                                                                   Conservative
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89.5%;
                                                                                                                   Score 2008.5; DB 4
Pred. No. 2.7e-122;
0; Mismatches 4;
                                                                                                                                                  DB 4;
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WS-10-057-531A-1

US-10-057-531A-1

Sequence 1, Application US/10057531A

Publication No. US20030161838A1

Publication No. US20030161838A1

APPLICANT: Lyon, Jeffrey A.

APPLICANT: Lyon, Jeffrey A.

APPLICANT: Lyon, Jeffrey A.

APPLICANT: Magov, Evelina

TITLE OF INVENTION: Floation and Purification of P. falciparum Merozoite

TITLE OF INVENTION: Procesin-142 Vaccine

FILE REFERENCE: 003/241/SAP

CURRENT APPLICATION NUMBER: US/10/057,531A

CURRENT FALING DATE: 2002-01-25

PRIOR APPLICATION NUMBER: US 60/264,535

PRIOR APPLICATION NUMBER: US 60/264,535

PRIOR FILING DATE: 2001-01-26

PRIOR APPLICATION NUMBER: US 60/347,564

PRIOR FILING DATE: 2001-01-26

SEQ ID NO: 1

LENGTHARE: Apple Macintosh Microsoft Word 6.0

SEQ ID NO: 1

LENGTH: 546
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US-10-057-531A-1
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Best Local
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Local Similarity 89.5%; Pred. No. 3.6e-122;
hes 385; Conservative 0; Mismatches 4;
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                                                                                                                                                                 TMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIFTFNLNLNDILNSRLKKRKYFLDV
                          VLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKTDEQKKESKFLPFLTNIETLYNNL
                                                                                                                                            TMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIFTFNLNLNDILNSRLKKRKYFLDV
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APPLICANT: LYON, Jeffrey A.
APPLICANT: LYON, Jeffrey A.
APPLICANT: Cohen, Joe D.
APPLICANT: Voss, Gerald
ITILE OF INVENTION: Recombinant P. falciparum Merozoite Protein-142 Vaccine
FILE REFERENCE: 003/238/SBP.
CURRENT APPLICATION NUMBER: US/10/057,532A
CURRENT FILING DATE: 2001-01-25
PRIOR APPLICATION NUMBER: US 60/264,535
PRIOR FILING DATE: 2001-01-26
PRIOR FILING DATE: 2001-01-26
INUMBER OF SEQ ID NOS: 12
SOFTWARE: Apple Macintosh Microsoft Word 6.0
SEQ ID NO 1
LENGTH: 546
TYPE: PRI
ORGANISM: Artificial sequence
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; OTHER INFORMATION:
US-10-057-532A-1
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US-10-057-532A-1
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Best Local Similarity
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                                               DTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNISQHQCVKKQCPENSGCFRHLDE 321
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REECKCLLNYKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRKKITCECTKPDSY
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Pred. No. 3.6e-122;
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RESULT 10
US-10-057-532A-5
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APPLICANT: Lyon, Veffrey A.
APPLICANT: Lyon, Evelina
TITLE OF INVENTION: Isolation and Purification of P.
TITLE OF INVENTION: Protein-142 Vaccine
FILE REFERENCE: 003/241/SAP
CURRENT APPLICATION NUMBER: US/10/057,531A
CURRENT FILING DATE: 2002-01-25
PRIOR APPLICATION NUMBER: US 60/264,535
PRIOR APPLICATION NUMBER: US 60/347,564
PRIOR FILING DATE: 2001-10-26
PRIOR PILING DATE: 2001-10-26
PRIOR PILING DATE: 2001-10-26
PRIOR APPLICATION NUMBER: US 60/347,564
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US-10-057-531A-5
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                                                                   Sequence 5, Application US/10057532A Publication No. US20030161839A1 GENERAL INFORMATION:
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LENGTH: 383
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APPLICANT: Lyon, Jeffrey A. APPLICANT: Angov, Evelina APPLICANT: Cohen, Joe D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
ORGANISM: Plasmodium falciparum
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APPLICANT: Birdsall, Berry
APPLICANT: Feeney, James
APPLICANT: Feeney, James
APPLICANT: Feeney, James
APPLICANT: Syed, Shabih
TITLE OF INVENTION: Malaria Vaccine
FILE REFERENCE: 18356/1005
CURRENT APPLICATION NUMBER: US/09/978,756
CURRENT FILING DATE: 2001-10-16
PRIOR APPLICATION NUMBER: PCT/GB00/01558
PRIOR FILING DATE: 2000-04-20
PRIOR FILING DATE: 1999-05-13
PRIOR FILING DATE: 1999-05-13
PRIOR APPLICATION NUMBER: 2,271,451
PRIOR APPLICATION NUMBER: 9909072.2
PRIOR APPLICATION NUMBER: 9909072.2
PRIOR FILING DATE: 1999-04-20
PRIOR APPLICATION NUMBER: 9909072.2

SEQ ID NOS: 3

US-09-978-756-3

GENERAL INFORMATION:

APPLICANT: Holder, APPLICANT: Birdsal APPLICANT: Feeney,

Anthony

Sequence 3, Application US/09978756 Patent No. US20020160017A1

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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 376; Conservative
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TYPE: PRT
ORGANISM: Plasmodium falciparum 3D7
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CECTKPDSYPLFDGIFCSS 383
                           CECTKPDSYPLFDGIFCSS 391
                                                                   SGCFRHLDEREECKCLLNYKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRKKIT
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Pred. No. le-119;
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Sequence 2, Application US/10062809

; Publication No. US20030100106A1

; GENERAL INFORMATION:
   APPLICANT: Chang, Sandra P.
   APPLICANT: Hashimoto, Ann
   APPLICANT: Nishimura, Tani
   TITLE OF INVENTION: BACULOVIRUS PRODUCED PLASMODIUM FALCIPARUM VACCINE
   FILE REFERENCE; A-67984-1/RFT/TAL/NBC
   CURRENT APPLICATION NUMBER: US/10/062,809
   CURRENT FILING DATE: 2002-06-28
   PRIOR APPLICATION NUMBER: US 60/266,281
   PRIOR APPLICATION NUMBER: US 60/266,281
   PRIOR APPLICATION NUMBER: US 60/266,281
   PRIOR FILING DATE: 2001-02-01
   NUMBER OF SEQ ID NOS: 79
   SOCTWARE: Patentin version 3.1
   SEQ ID NO 2
   LENGTH: 394
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                                                                                                                                             ; LENGTH; 394
TYPE; PRT
; ORGANISM: plasmodium falciparum
US-10-062-809-2
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US-10-062-809-2
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                                                                                Query Match
Best Local Similarity
Matches 369; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 94.9%; Score 1965; DB 3; Length 394; Best Local Similarity 100.0%; Pred. No. 1.6e-119; Matches 374; Conservative 0; Mismatches 0; Indels
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 FLDVLESDLMQFKHISSNEYIIEDSFKLLNSEQKNTLLKSYKYIKESVENDIKFAQEGIS 137
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                                                                                      Conservative
                                                                                   93.2%; Score 1931; DB 4; Length 394;
98.7%; Pred. No. 2.6e-117;
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Sequence 2, Application US/10935793
| Sequence 2, Application US/10935793
| Publication No. US20050037021A1
| GENERAL INFORMATION:
| APPLICANT: Chang, Sandra P.
| APPLICANT: Hashimura, Tani
| APPLICANT: Nishimura, Tani
| TITLE OF INVENTION: BACULOVIRUS PRODUCED PLASMODIUM FALCIPARUM VACCINE
| FILE REFERENCE: A-67984-1/RFT/TAL/MSC|
| CURRENT FILING DATE: 2004-09-07
| PRIOR APPLICATION NUMBER: US/10/062,809
| PRIOR PRILING DATE: 2002-02-01
| PRIOR PRILING DATE: 2002-02-01
| PRIOR APPLICATION NUMBER: US 09/500,376
| PRIOR APPLICATION NUMBER: US 60/266,281
| PRIOR APPLICATION NUMBER: US 60/266,281
| PRIOR APPLICATION NUMBER: US 60/266,281
| PRIOR FILING DATE: 2001-02-01
| SEQ ID NO 2
| SEQ ID NO 3
| SEQ ID NO 3
| TYPE: PRT
| ORGANISM: plasmodium falciparum
| US-10-935-793-2
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US-10-935-793-2
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Best Local Similarity 98.7%; Pred. No. 2.6e-117;
Matches 369; Conservative 1; Mismatches 4; Indels
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LINDDTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNISQHQCVKKQCFENSGCFR 317
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Sequence 2, Application US/10925385

Publication No. US20050095255A1

GENERAL INFORMATION:
APPLICANT: Chang, Sandra P.
APPLICANT: Kramer, Kenton J.
APPLICANT: Nishimura, Tani
ITILE OF INVENTION: Baculovirus Produced Plasmodium Falciparum Vaccine
FILE REFERENCE: A-67984-2
CURRENT APPLICATION NUMBER: US/10/925,385
CURRENT FILING DATE: 2004-08-24
PRIOR APPLICATION NUMBER: US 09/500,376
PRIOR FILING DATE: 1994-02-14
PRIOR APPLICATION NUMBER: US 09/507,768
PRIOR APPLICATION NUMBER: US 07/867,768
PRIOR APPLICATION NUMBER: US 0
RESULT 15
US-10-062-809-18
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LENGTH: 396
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Best Local Similarity
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APPLICANT: Chang, Sandra P.
APPLICANT: Hashimoro, Ann
APPLICANT: Nishimora, Tani
TITLE OF INVENTION: BACULOVIRUS PRODUCED PLASMODIUM FALCIPARUM VACCINE
FILE REFERENCE: A-67984-1/RFT/TAL/NBC
CURRENT APPLICATION NUMBER: US/10/062,809
CURRENT FILING DATE: 2002-06-28
PRIOR APPLICATION NUMBER: US 09/500,376
PRIOR FILING DATE: 2000-02-08
PRIOR FILING DATE: 2000-02-08
PRIOR FILING DATE: 2001-02-01
NUMBER OF SEQ ID NOS: 79
SOPTMANE: Patentin version 3.1
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Search completed: May 5, 2006, 00:29:05 Job time: 169 secs

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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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1: /SIDSS/ptodata/2/pubpaa/USO8 NEW PUB.pep1:*

2: /SIDSS/ptodata/2/pubpaa/USO8 NEW PUB.pep:*

3: /SIDSS/ptodata/2/pubpaa/USO7 NEW PUB.pep:*

4: /SIDSS/ptodata/2/pubpaa/USO8 NEW PUB.pep:*

5: /SIDSS/ptodata/2/pubpaa/USO8 NEW PUB.pep:*

6: /SIDSS/ptodata/2/pubpaa/USO9 NEW PUB.pep:*

6: /SIDSS/ptodata/2/pubpaa/USO9 NEW PUB.pep:*

7: /SIDSS/ptodata/2/pubpaa/USO9 NEW PUB.pep:*

8: /SIDSS/ptodata/2/pubpaa/USO9 NEW PUB.pep:*

9: /SIDSS/ptodata/2/pubpaa/USO9 NEW PUB.pep:*

9: /SIDSS/ptodata/2/pubpaa/USO9 NEW PUB.pep:*

10: /SIDSS/ptodata/2/pubpaa/USO9 NEW PUB.pep:*

11: /SIDSS/ptodata/2/pubpaa/USO9 NEW PUB.pep:*

11: /SIDSS/ptodata/2/pubpaa/USO9 NEW PUB.pep:*
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Copyright (c) 1993 - 2006 Biocceleration Ltd
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11 US-11-144-833-8
11 US-11-144-833-14
11 US-11-144-833-14
11 US-11-037-63-2964
9 US-10-240-771A-2
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11 US-11-085-68A-29300
US-10-93-626-1358
11 US-11-165-819-26
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Sequence 12, Appl
Sequence 11, Appl
Sequence 10, Appl
Sequence 2, Appli
Sequence 2, Appli
Sequence 4, Appli
Sequence 65, Appli
Sequence 65, Appli
Sequence 2964, Appli
Sequence 2045, Appli
Sequence 27, Appli
Sequence 27, Appli
Sequence 1358, Ap
Sequence 1358, Ap
Sequence 6, Appli
Sequence 6, Appli
Sequence 5, Appli
Sequence 1372, Ap
Sequence 1374, App
Sequence 134, App
Sequence 134, App
Sequence 214, App
Sequence 214, App
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45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22
114	114	114	115	115	115.5	115.5	116	116	116	116	116	116	116	116	116	116	116	116	117.5	117.5	117.5	117.5	117.5
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Sequence 12273, A	Sequence 10, Appl	Sequence 8, Appli	Sequence 256, App	Sequence 244, App	Sequence 4701, Ap	Sequence 3154, Ap	Sequence 41, Appl	Sequence 96, Appl	Sequence 94, Appl	Sequence 76, Appl	Sequence 228, App	•	Sequence 80, Appl	•	Sequence 254, App	Sequence 252, App	Sequence 4, Appli	Sequence 92, Appl	Sequence 10232, A	Sequence 8, Appli	Sequence 6, Appli	Sequence 4, Appli	Sequence 2, Appli

## ALIGNMENTS

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Sequence 12, Application US/11144833

Publication No. US20060018932A1

GENERAL INFORMATION:
APPLICANT: LONGACE-ANDRE, SHIRLEY
APPLICANT: LONGACE-ANDRE, SHIRLEY
APPLICANT: NATO, FARIDABANO
APPLICANT: MENDIS, KAMINI
TITLE OF INVENTION: OF PLASMODIUM MSP-1
FILE REFERENCE: 0660-0139-0XPCT
CURRENT FILING DATE: 2005-06-06
PRIOR APPLICATION NUMBER: US/11/144,833
CURRENT FILING DATE: 1999-03-10
PRIOR APPLICATION NUMBER: US/97/205,031
PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1997-02-14
PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1997-02-14
PRIOR PILING DATE: 1997-02-14
PRIOR FILING DATE: 1996-02-14
SOFTWARE: Patentin version 3.1
SEQ ID NO 12
LENGTH: 380
TYPE: PRT
ORGANISM: Plasmodium vivax-like sp.
US-11-144-833-12
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Best Local
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142 AVNEEVKKVEADIKAEDDKIKKIGSDSTKTTEKTQSMAKKAELEKYLPFLNSLQKEYESL 201
                                            151 ---ESIKKV---IKEEKEKFPSSPPTTPPSPAKTDEQKKES---KFLPFLTNIETLYNNL 201
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                                                                                                                                                                                                                                                                                                                          h 38.0%; Score 788; DB 11; Length 380; Similarity 43.0%; Pred. No. 1.4e-39;
                                                                                               SPSGEYIIKDPYKLLDLEKKKKLLGSYKYIGASIDKDLATANDGVTYYNKMGELYKTHLT 141
                                                                                                                                                                                                 SDYDVVYLKPLAGMYKTIKKOLENHVNAFNTNITDMLDSRLKKRNYFLEVLNSDLNPFKY 81
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APPLICANT: LONGACRE-ANDRE, SHIRLEY
APPLICANT: ROTH, CHARLES
APPLICANT: ROTH, CHARLES
APPLICANT: NATO, FARIDABANO
APPLICANT: BARNWELL, JOHN
APPLICANT: BARNWELL, JOHN
APPLICANT: MENDIS, KAMINI
TITLE OF INVENTION: OF PLASMODIUM MSP-1
FILE OF INVENTION: OF PLASMODIUM MSP-1
FILE REFERENCE: 0660-0139-0XPCT
CURRENT APPLICATION NUMBER: US/11/144,833
CURRENT FILING DATE: 1990-03-10
PRIOR APPLICATION NUMBER: US/9/125,031
PRIOR APPLICATION NUMBER: US/9/125,031
PRIOR APPLICATION NUMBER: US/9/125,031
PRIOR APPLICATION NUMBER: PCT/FR97/00290
PRIOR APPLICATION NUMBER: FCT/FR97/00290
PRIOR APPLICATION NUMBER: FCT/FR97/00290
PRIOR APPLICATION NUMBER: FCT/FR97/00290
PRIOR FILING DATE: 1996-02-14
PRIOR FILING DATE: 1996-02-14
NUMBER OF SEQ ID NOS: 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn version 3.1 SEQ ID NO 13
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                                                                                                                                                                                                                                                                                                                                                                     NEYDVIYLKPLAGVYRSLKKQIEKNIFTFNLNLNDILNSRLKKRKYFLDVLESDLMQFKH 91
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                                                                                         DFEAIKKLINDDTKKDMLGKLLSTGLV-QNFPNTIISKLIEGKFQDMLNISQHQCVKKQC 309
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                                                     --KSEKK--NEVKSSGLLEKLMKSKLIKENESKEILSQLLNVQTQLLTMSSEHTCIDTNV 303
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 RESULT 4
US-11-144-833-10
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APPLICANT: ROTH, CHARLES
APPLICANT: NATO, FARIDABANO
APPLICANT: BARNWELL, JOHN
APPLICANT: BARNWELL, JOHN
APPLICANT: MENDIS, KAMINI
ITILE OF INVENTION: RECOMBINANT PROTEIN CONTAINING A C-TERMINAL FRAGMENT
TITLE OF INVENTION: OF PLASMODIUM MSP-1
FILE REFERENCE: 0660-0139-0XPCT
CURRENT APPLICATION NUMBER: US/11/144,833
CURRENT FILING DATE: 1095-06-06
PRIOR APPLICATION NUMBER: US/09/125,031
PRIOR APPLICATION NUMBER: US/09/125,031
PRIOR APPLICATION NUMBER: PT/FR97/00290
PRIOR APPLICATION NUMBER: PT/FR97/00290
PRIOR FILING DATE: 1997-03-10
PRIOR FILING DATE: 1997-03-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; LENGTH: 379
; TYPE: PRT
; ORGANISM: Plasmodium
US-11-144-833-11
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Best Local Similarity
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GSEPLFEGVFCS 379
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                                                                                                                   LDGTEEWRCLLYFKEDAGKCVPAPNMTCKDKNGGCAPEAECKMND---
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41.9%; Pred. No. 2e-36;
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GENERAL INFORMATION:

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APPLICANT: LONGACES - ANDRE, SHIRLEY
APPLICANT: LONGACES - ANDRES
APPLICANT: NATO, FARIDABANO
APPLICANT: MATO, FARIDABANO
APPLICANT: MENDIS, KAMINI
ITILE OF INVENTION: RECOMBINANT PROTEIN CONTAINING A C-TERMINAL FRAGMENT
ITILE OF INVENTION: OF PLASMODIUM MSP-1
FILE REFERENCE: 0660-0139-0XPCT
CURRENT APPLICATION NUMBER: US/01/1/44,833
CURRENT APPLICATION NUMBER: US/09/125,031
PRIOR APPLICATION NUMBER: US/09/125,031
PRIOR FILING DATE: 1999-03-10
PRIOR FILING DATE: 1999-03-10
PRIOR FILING DATE: 1999-03-10
PRIOR FILING DATE: 1997-02-14
PRIOR FILING DATE: 1997-02-14
PRIOR FILING DATE: 1996-02-14
SOFTWARE: Patentin version 3.1
SEQ ID NOS: 15
SEQ ID NOS: 15
SEQ ID NOS: 15
COMMENT: Artificial Sequence
FEATURE:
COMMENT: NEWSTANDER OF SEQ ID NOS: 15
SEQ ID NOS: ARTIFICIAL SEQUENCE
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TITLE OF INVENTION: RECOMBINANT PROTEIN CONTAINING A C-TERMINAL FRAGMENT
TITLE OF INVENTION: OF PLASMODIUM MSP-1
FILE REFERENCE: 0660-0139-0XPCT
CURRENT APPLICATION NUMBER: US/11/144,833
CURRENT FILING DATE: 2005-06-06
PRIOR APPLICATION NUMBER: US/09/125,031
PRIOR FILING DATE: 1999-03-10
PRIOR FILING DATE: 1999-03-10
PRIOR APPLICATION NUMBER: PCT/FR97/00290
PRIOR APPLICATION NUMBER: PCT/FR97/00290
PRIOR APPLICATION NUMBER: FR96/01822
PRIOR FILING DATE: 1996-02-14
PRIOR FILING DATE: 1996-02-14
VUMBER OF SEQ ID NOS: 15
SOFTWARE: Patentin version 3.1
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                                                                                                 ; OTHER INFORMATION: SYNTHETIC US-11-144-833-5
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LENGTH: 108
TYPE: PRT
ORGANISM: Plasmodium falciparum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 5, Application US/11144833 Publication No. US20060018932A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                               Query Match
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Local Similarity hes 91; Conserval
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match 25.4%;
Local Similarity 94.8%;
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  Conservative
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                       25.4%;
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Score 527; DB 11; Length 116;
Pred. No. 8.5e-25;
1; Mismatches 2; Indels
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Pred. No. 7.8e-25;
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APPLICANT: ROTH, CHARLES
APPLICANT: NATO, FARIDARANO
APPLICANT: BARNWELL, JOHN
APPLICANT: MENDIS, KAMINI
ITILE OF INVENTION: RECOMBINANT PROTEIN CONTAINING A C-TERMINAL FRAGMENT
ITILE OF INVENTION: OF PLASMODIUM MSP-1
FILE REFERENCE: 0660-0139-0XPCT
CURRENT APPLICATION NUMBER: US/01/1/144,833
CURRENT APPLICATION NUMBER: US/09/125,031
PRIOR APPLICATION NUMBER: US/09/125,031
PRIOR FILING DATE: 1999-03-10
PRIOR FILING DATE: 1999-03-10
PRIOR FILING DATE: 1997-02-14
PRIOR FILING DATE: 1997-02-14
PRIOR FILING DATE: 1996-02-14
PRIOR APPLICATION NUMBER: FR96/01822
PRIOR APPLICATION NUMBER: FR96/01822
PRIOR FILING DATE: 1996-02-14
NUMBER OF SEQ ID NOS: 1596-02-14
NUMBER: Patentin version 3.1
SOFTWARE: Patentin version 3.1
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APPLICANT: LONGACRE-ANDRE, SHIRLEY
APPLICANT: ROTH, CHARLES
APPLICANT: NATO, FARIDABANO
APPLICANT: NATO, FARIDABANO
APPLICANT: MENDIS, KAMINI
APPLICANT: MENDIS, KAMINI
TITLE OF INVENTION: RECOMBINANT PROTEIN CONTAINING A C-TERMINAL FRAGMENT
TITLE OF INVENTION: OF PLASMODIUM MSP-1
TILE REFERENCE: 0660-0139-0XPCT
CURRENT FILING DATE: 2005-06-06
PRIOR APPLICATION NUMBER: US/11/144,833
CURRENT FILING DATE: 1999-03-10
PRIOR APPLICATION NUMBER: US/09/125,031
PRIOR FILING DATE: 1997-02-14
PRIOR FILING DATE: 1997-02-14
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: 95
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: SYNTHETIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
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Similarity 96.8%;
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Pred. No. 1.2e-24;
1; Mismatches 2;
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; PRIOR FILING DATE: 1996-02-14; NUMBER OF SEQ ID NOS: 15; SOFTWARE: PatentIn version 3.1; SEQ ID NO 8; LENGTH: 127; TYPE: PRT; ORGANISM: Plasmodium falciparum US-11-144-833-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: US/09/125,031
PRIOR APPLICATION NUMBER: DET/FR97/00290
PRIOR PRILING DATE: 1997-03-14
PRIOR FILLING DATE: 1997-02-14
PRIOR APPLICATION NUMBER: FR96/01822
PRIOR FILLING DATE: 1996-02-14
PRIOR FILLING DATE: 1996-02-14
NUMBER OF SEQ ID NOS: 15
SOFTWARE: Patentin version 3.1
SEQ ID NO 14
ENOTH: 281
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                                                                                                                                                                                                                                                                                                                                                                                        ; ORGANISM: Artificial Sequence ; PEATURE: OTHER INFORMATION: SYNTHETIC US-11-144-833-14
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                                                                                                                                                                                                                                                                                                                                 Query Match 20.5%; Score 424.5; DB 1
Best Local Similarity 35.7%; Pred. No. 2.7e-18;
                                                                                                                                                                                                                                                                                                               Matches
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Best Local (
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APPLICANT: ROTH, CHARLES
APPLICANT: NATO, FARIDABANO
APPLICANT: BARNWELL, JOHN
APPLICANT: BARNWELL, JOHN
APPLICANT: MENDIS, KAMINI
TITLE OF INVENTION: RECOMBINANT PROTEIN CONTAINING A C-TERMINAL FRAGMENT
TITLE OF INVENTION: OF PLASMODIUM MSP-1
FILE REFERENCE: 0660-0139-0XPCT
CURRENT APPLICATION NUMBER: US/11/144,833
CURRENT FILING DATE: 2005-06-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT
                                                                                                               153 IKKVIKEEKEKFPSSPPTTPPSPAKTDEQKKESKFLPFLTNIETL---YNNLVNKIDDYL 209
                                                                                                                                                                                                                                                                                                             131;
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                                                                                                                                                                                                                                 93 SSNBYTIEDSFKLLNSEQKNTLLKSYKYTKESVENDIKFAQEGISYYEKVLAKYKDDLES 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             95
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90; Conserv
                            INLKAKINDCNVEKDEAHVKITKLSDLKAIDDKID-LFKNPYDFEAIKKLINDDTKKDML
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  ----KKINNCQEKKEEV---
                                                                                                                                                  PSGEYIIKDPYKLLDLEKKK--LGSYKYIGASDDT----ANDG--YYKWGLYKH-----
                                                                           ---LVKVEID-
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llarity 96.8%;
Conservative
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Pred. No. 1.6e-24;
  ----KLDYKMDELYKS----
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                                                                             KKGKAKKELKYLPFLSQKEYLVKVYTDL---
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                                      268
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APPLICANT: SUDARSANAM, SUCHA
TITLE OF INVENTION: NOVEL PROTEASES
FILE REFERENCE: 038602/1214
CURRENT APPLICATION NUMBER: US/11/037,243
CURRENT FILING DATE: 2005-05-26
PRIOR APPLICATION NUMBER: US/09/888,615
PRIOR FILING DATE: 2001-06-26
PRIOR FILING DATE: 2001-06-26
PRIOR FILING DATE: 2000-06-26
PRIOR FILING DATE: 2000-06-26
SOFTWARE: PATENTING DATE: 2000-06-26
LENGTH: 980
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US-11-037-243-65
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: PLOWMAN, G
APPLICANT: WHYTE, DA
APPLICANT: CABNEPEEL
APPLICANT: CHARYDCZA
APPLICANT: MANNING,
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Best Local Similarity 20.9%;
Matches 77; Conservative 6
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                                                                                                                                                                                                                                                                                                                                                                                     387 RRFAHLLVKK------DICNSETKKDLLK------KVKNAISATAERFSGYMQNDAHE 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                341 LOGFSNLGNTCYM------NAILOSLFSLQSFANDLLKQGIPWKKIPLNAL---I 386
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                                                                                                                                                                                                                                                                                                                                                                                                                          87 MQFKHISSNEYIIEDSFKLLNSEQKNTLLKSYKYIKESVENDIKFAQEGISYY-----
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                                                                      TENTKPPFTLGWSAHMAMSRPLKA----SQMVNSCITSPSTPSKKFTFKSKSSLALCLDS 651
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                                                                                                                                                                                      KK-----LINDDTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNISQHQCVKKQC 309
                                                                                                                                                                                                                               VQHSIICKACGEIIPKREQFNDLSIDLPRRKKPLPP----RSIQDSLDLFFRAEELEYSC
                                                                                                                                                                                                                                                                                                         FLSQCLDQLKEDMEKLNKTWKTEPVSGEENSPDISATRAYT------CPVITNLEFE 483
                                                                                                                                                                                                                                                                                                                                             --EKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKTDEOKKESKFLPFLTNIE-T 196
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FEGVFCS
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DSEDELKR 659
                                  DSGSSRKK 370
                                                                                                            PENS-----GCFRHLDEREECKCLLNYKQEGDKCVENPN-PTCNENNGGCDADATCTEE 362
                                                                                                                                                  EKCGGKCALVRH--KFNRLPRVLILHLKRYSFNVALS--LNNKIGQQVIIPRYLTLSSHC 595
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CHARYDCZAK, GLEN
MANNING, GERARD
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; Pred. No. 0.7;
64; Mismatches
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RESULT 11
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CURRENT FILING DATE: 2004-03-04
PRIOR APPLICATION NUMBER: 60/164,258
PRIOR FILING DATE: 1999-11-09
NUMBER OF SEQ ID NOS: 4472
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 2964
                                                                                                                                                        TITLE OF INVENTION: New protein with poly
FILE REFERENCE: hupolypromolcbws
CURRENT APPLICATION NUMBER: US/10/240,771A
CURRENT FILING DATE: 2002-10-04
NUMBER OF SEQ ID NOS: 2
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 2
                                                                                                                                                                                                                                                                                                 Sequence 2, Application US/10240771A
Publication No. US20060036074A1
GENERAL INFORMATION:
APPLICANT: Merck Patent GmbH
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Publication No. US20050255478A1
GENERAL INFORMATION:
APPLICANT: KIMMERLY, WILLIAM JOHN
TITLE OF INVENTION: STAPHYLOCOCCUS EPIDERMIDIS NUCLEIC ACIDS
FILE REFERENCE: PU3480US
Query Match 6.1%;
Best Local Similarity 20.1%;
Matches 66; Conservative 6
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Best Local Similarity
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                                                                                                 TYPE: PRT
ORGANISM: Homo
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LOCATION: (5024)
OTHER INFORMATION: variable amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    215 KINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNPYDFEAIKKLINDDTKKDMLGKLLST 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 101 DSFKLLNSEQKNTLLKSYKYIKESVENDIKFAQEGISYYEKVLAKYKDDLESIKKVIKEE 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              46 YRSLKKQIE---KNIFTENLINLINDILNSRLKKRKYFLDVLE--SDLMQFKHISSNEYIIE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AVNNLHGDQKLAQSKQDANNQLNHLDDLTEEQKNHF-----KPLINNADTRDEVNKQLEI 1629
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    63;
Score 126.5; D
Pred. No. 8.7;
63; Mismatches
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Gaps
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    17;
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TITLE OF INVENTION: Genes and Uses for Plant Imp
FILE REFERENCE: 38-21(53450)B EP
CURRENT APPLICATION NUMBER: US/11/087,099
CURRENT FILING DATE: 2005-03-22
NUMBER OF SEO ID NOS: 12464
SEQ ID NO 10455
LENGTH: 807
TYPE: PRT
ORGANISM: Helicobacter pylori
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353 CDADATCTEEDSGSSRKKITCECTK---PDSYPLFD 385
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                                                                                                                                       RKKCLK-DLPKDLQKKVLAKESVK------AYLDCVSQAKNEAEKKECEKLLT
                                                                                                                                                                                 IKKLINDDTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNISQHQCVKKQC-----
                                                                                                                                                                                                                        LEEAKKSVKAYL-DCVSQAKTEDEKKECEKLLTPEARKLLEQQA----LDCLKNAKTDEE
                                                                                                                                                                                                                                                                                                 EKLLTPEAKKLLEEEAKESVKAYLDCV--90AKTEAEKKECEKL------LTPEARKK
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                                                              PEARKLLEEAKESIKAYKOCVSKARNEKEKKECEKLLT--PEAKKLLE---
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                                                                                                                                                                                                                                                            IDDYLINLKAKINDC-----NVEKDEAHVKIT----KLSDLKAIDDKIDLFKNPYDFEA
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22.2%; Pred. No. 4;
                                                                                                 --NSGCF---RHLDEREECKCLLNYKOEGDKCVENPNPTCNENNGG 352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             69; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             119;
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Length 807; Indels

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RESULT 14
US-10-793-626-1358
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Sequence 1358, Application US/10793626
Publication No. US20050255478A1
GENERAL INFORMATION:
APPLICANT: KIMMERIY, WILLIAM JOHN
TITLE OF INVENTION: STAPHYLOCOCCUS EPIDERMIDIS NUCLEIC ACIDS AND PROTEINS
FILE REFERENCE: PUJ480US
CURRENT APPLICATION NUMBER: US/10/793,626
CURRENT FILING DATE: 2004-03-04
PRIOR APPLICATION NUMBER: 60/164,258
PRIOR FILING DATE: 1999-11-09
NUMBER OF SEQ ID NOS: 4472
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 1358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:

APPLICANT: Alexandrov, Nickolai et al.

TITLE OF INVENTION: Sequence-Determined DNA Fragments and

TITLE OF INVENTION: Therby

FILE REFERENCE: 2750-1592PUS2

CURRENT APPLICATION NUMBER: US/11/096,568A

CURRENT FILING DATE: 2005-04-01

NUMBER OF SEQ ID NOS: 34471

SEQ ID NO 29300

LENGTH: 1054
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Best Local (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: misc_feature
LOCATION: (1). (1054)
OTHER INFORMATION: Ceres Seq. ID no. 4808407
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ORGANISM: Arabidopsis thaliana
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          106 LNSEQK--NTLLKSYKYIKESVENDIKFAQEGISYYEKVLAKYKDDLESIKKVIKEEKEK 163
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1 Similarity 18.9%;
77; Conservation
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LSRTLQE--RSNMLVKVSEEKSRADAEIETLKSNLEMCEREIKSLKYEVHVVSKELE---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IKKLINDDTKKDMLGKL-------LSTGLVQ-----NFPNTIISKLIEGKF
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                                                                                                                                                                                                                                                                                                                                                           LAQMKLEVENLG------RDSGDARQKRSPVKVSSPCKSPGGY
                                                                                                                                                                                                                                                                                                                                                                                               ------NENNGGCDADATCTEEDSGSSRK-----KITCECTKPDSY 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DGALKECMRQIRNLKKDHEVKLHDVALSKTKQIEKMTMEFEKRMCDYEQELLRSAADSDA
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                                                                                                                                                                                                                                                                                                                                                                                                                                       -- IRNEEKNMCIRSAESANK---QHLEGVKKIAKLEAECQRLRSLVRK-----KLPGPAA
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Pred. No. 5.
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ed. No. 5.5;
Mismatches 142;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Helicobacter pylori 26695
FEATURE:
NAME/KEY: unsure
LOCATION: (1)..(1927)
OTHER INFORMATION: unsure at all Xaa locations
US-11-087-099-5472
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US-10-793-626-1358
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US-11-087-099-5472
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Publication No. US20060041961A1
GENERAL INFORMATION:
APPLICANT: Abad, Mark S. et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 5472
LENGTH: 1927
                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
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Best Local Similarity
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Best Local Similarity
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FILE REFERENCE: 38-21 (53450)B EP
CURRENT APPLICATION NUMBER: US/11/087,099
CURRENT FILING DATE: 2005-03-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 12464
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TYPE: PRT
                                                                                           891
                                                                                                                                 184
                                                                                                                                                                                                               149 DLESIKKVI-----KEEKEKFPSSPPTTPP------SPAKTDEQKK 183
                                                                                                                                                                                                                                                         785
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              215
                                                                                                                                                                                                                                                                                                                                        744 KKECEK-----ARNEKEKKE 784
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     394 EIKRLYSEYNDLITKKEELTKEMNNKNKDFA-----IIEHYTEEIYKLKKIIDE--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   340 YHNEIKGFOKOLEHLSTRENEITOFNOYLEKNOVFFNOLD-----KIISSYQQKPVIEE 393
                                                                                                                                                                                                                                                                                                                                                                                                                        105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     46 YRSLKKQIEKNIFTENLNLNDI--LNSRLKKRKYFLDVLESDLMQFKHISSNEY--IIED 101
                                                                                                                                                                                                                                                                                                                                                                            50 KKQIEKNIFTFNLNLNDILNSRLKKR------KYFLDVLESDLMQFKHISSNEYIIED 101
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            KAYLDCVSQAKTEAEKKECEKLLTPEAKKLLEQQA----LDCLKNA-KTEADKKRCVKDL
                                                                                                                                   ESKFL---
                                                                                                                                                                         --ESVKAYLDCVSQAKTEAEKKECEKLLTPEARKLLEEAKKSVKAYLDCVSQAKTEAEKK 890
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                                                ----DC-----NVEKDEAHVKIT----KLSDLKAIDDKIDLFKNPYDFEAIKKLINDDT 263
                                                                                      ECEKLLTPEARKLLEEXAKESVKAYLDCVSQAKNEAEKKECEKLLTLESKKKLEEAKKSV
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                                                                                                                                                                                                                                                                                                                                                                                                                                       6.0%; Score 123.5;
21.3%; Pred. No. 16;
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                                                                                                                                 ----PFLTNIETLYNNLVNKIDDYLINLKAKIN------
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Pred. No. 2.9;
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Search completed: May 5, 2006, 00:29:37 Job time : 28 secs

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Perfect score:
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seq length:
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 Query
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45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	
1165.5	1165.5	1166.5	1166.5	1250.5	1254.5	1900	1911	1921	1921	1921	1921	1921	1928	1928	1928	1928	1928	1928	1928	1931	
56.3	56.3	56.3	56.3	60.4	•	91.7	92.3	•	•	92.8	•	•	•	93.1	93.1	93.1		93.1	93.1	93.2	
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AAE29346	AAE29352	AAE29345	AAW54145	ADE24164	ADE24161	ADB85406	ADB85408	ADZ72134	ADX85010	ADY21415	AAE39698	ABB78326	ADZ72147	ADX85023	ADY21428	AAE39701	ADB85411	ADX85025	AAE39704	ADZ72133	
Aae29346	Aae29352	Aae29345	Aaw54145	Ade24164	Ade24161	Adb85406	Adb85408	Adz72134	Adx85010	Ady21415	Aae39698	Abb78326	Adz72147	Adx85023	Ady21428	Aae39701	Adb85411	Adx85025	Aae39704	Adz72133	
Plasmodiu	Plasmodiu	Plasmodiu	P. falcip	Plasmodiu	Plasmodiu	NtMSP1-42	NtMSP1-42	Plasmodiu	Plasmodiu	Plasmodiu	Baculovir	Amino aci	Plasmodiu	P. falcip	Baculovir	Baculovir	p42-M con	Plasmodiu	Baculovir	Plasmodiu	

## ALIGNMENTS

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RESULT 1
ABB79627
Key
Peptide
                                                                      N-PSDB;
                                                                                                                                                                                                                                        Merozoite
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                                                                                                                                                                                                                                                                                           ABB79627 standard; protein; 391
                                                                              WPI;
                                                                                          Lyon
                                                                                                                   26-JAN-2001; 2001US-0264535P.
                                                                                                                                25-JAN-2002; 2002WO-US002554.
                                                                                                                                              01-AUG-2002.
                                                                                                                                                           WO200258727-A2.
                                                                                                                                                                              Protein
                                                                                                                                                                                                                Chimeric
                                                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                                           Plasmodium
                                                                                                                                                                                                                                                     Plasmodium falciparum MSP-1(42) recombinant protein.
                                                                                                                                                                                                                                                                   21-OCT-2002
                                                                                                       (REED-)
                                                                                         JA,
                                                                      2002-590798/63.
DB; ABN84474.
                                                                                                       REED ARMY INST RES WALTER.
                                                                                        Angov E,
                                                                                                                                                                                                                                        surface protein-1; MSP-1; malaria; vaccine; protozoacide
                                                                                                                                                                                                                           falciparum.
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                                                                                                                                                                             /note= "(His)6 tag and
18. .391
                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                        note=
                                                                                          Cohen JD,
                                                                                                                                                                        "MSP-1 (42) "
                                                                                          Voss
                                                                                                                                                                                                                                                                                            A
                                                                                          G
                                                                                                                                                                                    flexible linker peptide"
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The present sequence is that of a recombinant protein comprising the Plasmodium falciparum 3D7 merozoite surface protein-1 42 kDa fragment (MSp-1(42)) with an N-terminal ([His]6 tag and linker. Recombinant ESP-1(42) protein was produced as a soluble protein in Escherichia coli host

Disclosure;

Page 98-99; 99pp;

English.

New vaccine comprising Plasmodium falciparum MSP-142 protein and an adjuvant, useful against malaria or for eliciting immune responses against P. falciparum.

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           Lyon JA,
                                                                     29-JAN-2001; 2001US-0264535P.
26-OCT-2001; 2001US-0347564P.
                                                                                                                 25-JAN-2002; 2002WO-US002428
                                                                                                                                                 16-JAN-2003
                                                                                                                                                                             WO2003004525-A2
                                                                                                                                                                                                           Plasmodium
                                                                                                                                                                                                                                      MSP-1_42; merozoite protein; protozoacide; vaccine; malaria; mosquito
                                                                                                                                                                                                                                                                  E. coli expressed P. falciparum MSP1_42 (3D7) protein sequence.
                                                                                                                                                                                                                                                                                                  28-APR-2003
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                                        (REED-) REED ARMY INST RES WALTER.
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                                                                                                                                                                                                                                                                                                                                                            standard; protein; 391
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Pred. No. 1.7e-140;
); Mismatches 0;
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RESULT 3
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XX WAla
E. C
XX Mala
KW inmu
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29-JAN-2001; 2001US-0264535P
                               25-JAN-2002; 2002US-00057532.
                                                                                              US2003161839-A1.
                                                                                                                            Plasmodium falciparum
                                                                                                                                                                                                          E. coli expressed Plasmodium
                                                                                                                                                                                                                                         03-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; Page 103; 104pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New recombinant Plasmodium falciparum merozoite protein (MSP)-142 which retains its native folding, useful for detecting and preventing malaria infection, and for antibody production.
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                                                                28-AUG-2003
                                                                                                                                                                         Malaria; vaccine; merozoite surface protein-142; MSP-142;
                                                                                                                                                                                                                                                                         ADM86524;
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Pred. No. 1.7e-140;
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Best Local :
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                                                                                                                                                            ABB79625
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(ANGO/)
(COHE/)
                           Merozoite
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                                                                 coli expressed P. falciparum MSP-1 recombinant protein.
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COHEN J D.
VOSS G.
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                                                                                                                                                                                                                                                                                                                                                                                                                                QHQCVKKQCPENSGCFRHLDEREECKCLLNYKQEGDKCVENPNPTCNENNGGCDADATCT
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ilarity 100.0%;
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Pred. No. 1.7e-140;
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                           vaccine; protozoacide.
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The present sequence is that of a recombinant protein comprising Plasmodium falciparum 3D7 merozoite surface protein-1 42 kDa fragment (MSP-1(42)) with an N-terminal (His)6-tag for affinity purification and 3 linker amino acids. The levels of expression of the recombinant protein, encoded by plasmid pET-IEGR-42(AT), were 2-5% of total E. coli protein, and the protein was correctly folded based on immunoreactivity with a series of MSP-1(19) specific monoclonal antibodies. The present invention relates to the production of large amounts of MSP-1(42) which maintain conformational epitopes critical for development of vaccines. The vaccines are useful against malaria or for eliciting immune responses against P. falciparum. The recombinant MSP-1(42) proteins are useful in diagnostic assays, for in vitro monitoring of malaria infection or prognosing the response to treatment of malaria patients, and for production of antibodies used for malaria antigen detection or as
                                                                                                                                                                                                                                                                                                                                                                                                       New vaccine comprising Plasmodium falciparum MSP-142 protein and adjuvant, useful against malaria or for eliciting immune responsagainst P. falciparum.
                                    Sequence 393
                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 92-93; 99pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2002-590798/63.
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                                                                      therapeutic or prophylactic
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Length 393;
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Query Match Best Local Simi Matches 390; 359 301 299 241 239 181 179 121 119 61 59 ۲  $\vdash$ Similarity MAHHHHHHPGGS--GSGTMAISVTMDNILŚGFENEYDVIYLKPLAGVYRSLKKQIEKNIF |||||||||||| MAHHHHHPGGSIEGRGTMAISVTMDNILŚGFENEYDVIYLKPLAGVYRSLKKQIEKNIF CTEEDSGSSRKKITCECTKPDSYPLFDGIFCSS IDDKIDLFKNPYDFEAIKKLINDDTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLN KYIKESVENDIKFAQEGISYYEKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKT TFNLNLNDILNSRLKKRKYFLDVLESDLMQFKHISSNEYIIEDSFKLLNSEQKNTLLKSY TFNLNLNDILNSRLKKRKYFLDVLESDLMQFKHISSNEYIIEDSFKLLNSEQKNTLLKSY ISQHQCVKKQCPENSGCFRHLDEREECKCLLNYKQEGDKCVENPNPTCNENNGGCDADAT KYIKESVENDIKFAQEGISYYEKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKT ISQHQCVKKQCPENSGCFRHLDEREECKCLLNYKQEGDKCVENPNPTCNENNGGCDADAT IDDKIDLFKNPYDFEAIKKLINDDTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLN Conservative 99.2%; <u>.</u> Score 2055; DB 5; Pred. No. 2.4e-139; D; Mismatches 1; 391 Indels 2 Gaps 358 180 178 120 118 360 300 298 240 238 60

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Best Local S
Matches 390
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                                                                                                                                                                                                                                                                                                                                                                              Sequence 393 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 96-97; 104pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New recombinant Plasmodium falciparum merozoite protein (MSP)-142 which retains its native folding, useful for detecting and preventing malaria infection, and for antibody production.
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26-OCT-2001;
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                                                                                                                                                                                                                                                                                  MAHHHHHPGGS--GSGTMAISVTMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIF 58
                                                                                                              DEQKKESKFLPFLTNIETLYNNLVNKIDDYLINLKAKINDCNVEKDEAHVKITKLSDLKA 238
                                                                                                                                                      KYIKESVENDIKFAQEGISYYEKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKT
                                                                                                                                                                     KYIKESVENDIKFAQEGISYYEKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKT
                                                                                                                                                                                                                            TFNLNLNDILNSRLKKRKYFLDVLESDLMQFKHISSNEYIIEDSFKLLNSEQKNTLLKSY 118
                                                                                                                                                                                                                                                                   MAHHHHHPGGSIEGRGTMAISVTMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIF
ISQHQCVKKQCPENSGCFRHLDEREECKCLLNYKQEGDKCVENPNPTCNENNGGCDADAT
                                          IDDKIDLFKNPYDFEAIKKLINDDTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLN
                                                        IDDKIDLFKNPYDFEAIKKLINDDTKKDMLGKLLGTGLVQNFPNTIISKLIEGKFQDMLN
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2001US-0347564P.
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Pred. No. 2.4e-139;
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                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to a malaria vaccine which comprises Plasmodium falciparum merozoite surface protein-142 (NS-142), and an adjuvant consisting of A, B, C, D, and E. The invention also relates to a method for inducing protective immune response to malaria. The invention is used as diagnostic reagent for antibody production or as vaccine against malaria infection. The present sequence is Escherichia coli expressed P. falciparum MSP142 (3D7) protein sequence in pET42A. This sequence is used to illustrate the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Malaria vaccine comprises -142.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (LYON/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Malaria; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pET42A Plasmodium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2003-843522/78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lyon
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26-OCT-2001; 2001US-0347563P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Plasmodium falciparum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           03-JUN-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADM86520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (COHE/)
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       179
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                                                                                                                                                                                                                                                                                                                                      390;
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COHEN J D.
VOSS G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LYON J A.
                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                    TFNLNLNDILNSRLKKRKYFLDVLESDLMQFKHISSNEYIIEDSFKLLNSEQKNTLLKSY
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                                                                                                                                                                                                                                                                                                                                                                                                                                 393
                                                                            XYIKESVENDIKFAQEGISYYEKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKT
                                                                                                                                           TFNLNLNDILNSRLKKRKYFLDVLESDLMQFKHISSNEYIIEDSFKLLNSEQKNTLLKSY
                                                                                                                                                                                                                                         MAHHHHHHPGGSIEGRGTMAISVTMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIF
    DEQKKESKFLPFLTNIETLYNNLVNKIDDYLINLKAKINDCNVEKDEAHVKITKLSDLKA
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                                                   KYIKESVENDIKFAQEGISYYEKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKT
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                                                                                                                                                                                                                                                                                                                                    Conservative
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                                                                                                                                                                                                                                                                                                                                 Score 2055; DB 7;
Pred. No. 2.4e-139;
0; Mismatches 1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Voss
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                                                 The present sequence is that of a recombinant protein comprising CP plasmodium falciparum 3D7 merozoite surface protein-1 42 kDa fragment (MSD-1(42)) with an N-terminal (His)6-tag for affinity purification and CP an additional vector-encoded sequence (approximately 50 amino acids) CP which include an enterokinase cleavage site, a S-peptide tag and a thrombin cleavage site fised to the N-terminus of MSD-1(42). The levels of expression of this fusion protein, encoded by plasmid pET(50)MSD-142, CP were 5-10% of total E. coli protein in crude cell lysates, and the protein was purified to near homogeneity with 2 consecutive passes over a Ni2+-NTA agarose resin. The present invention relates to the production of large amounts of MSD-1(42) which maintain conformational epitopes CP in the protein of the vaccines are useful against CP malaria or for eliciting immune responses against D. falciparum. The recombinant MSD-1(42) proteins are useful in diagnostic assays, for in CP vitro monitoring of malaria infection or prognosing the response to treatment of malaria patients, and for production of antibodies used for malaria antigen detection or as therapeutic or prophylactic agents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New vaccine comprising Plasmodium falciparum MSP-142 protein and an adjuvant, useful against malaria or for eliciting immune responses against P. falciparum.
   Sequence 431 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2002-590798/63.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Merozoite surface protein-1; MSP-1; malaria; vaccine; protozoacide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E. coli expressed
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABB79624;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 90-91; 99pp; English.
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Query Match

97.0%;

Score 2008.5;

DB 5

Length 431;

The invention relates to a recombinant Plasmodium falciparum merozoite protein, (MSP)- $1\_42$  which retains its native folding. The protein is

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                                 Claim 5; Page 95-96; 104pp; English.
                                                       New recombinant Plasmodium falciparum merozoite protein (MSP)-142 which retains its native folding, useful for detecting and preventing malaria infection, and for antibody production.
                                                                                                                                                                                                                                                                                                       MSP-1_42;
                                                                                                                                                                                                                                                                                                                                                                              ABP71272;
                                                                                                      WPI; 2003-221577/21.
                                                                                                                                                    (REED-)
                                                                                                                                                                          29-JAN-2001;
26-OCT-2001;
                                                                                                                                                                                                             25-JAN-2002; 2002WO-US002428
                                                                                                                                                                                                                                     16-JAN-2003.
                                                                                                                                                                                                                                                            WO2003004525-A2
                                                                                                                                                                                                                                                                                  Plasmodium falciparum.
                                                                                                                                                                                                                                                                                                                                                        28-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                    ABP71272 standard; protein; 431
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HHHHHHSSGLVPRGSGMKETAAAKFERQHMDSPDLGTDDDDKAMADIGSIEGRGTMAISV 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                PLFDGIFCSS 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REECKCLLNYKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRKKITCECTKPDSY 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNISQHQCVKKQCPENSGCFRHLDE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HHHHHHPGG-----SGSGTMAISV 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PLFDGIFCSS
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                                                                                                                             Angov E;
                                                                                                                                                                                                                                                                                                         merozoite
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2001US-0347564P.
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                                                                                                                                                                                                                                                                                                         protein;
                                                                                                                                                                                                                                                                                                                                                        entry)
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                                                                                                                                                                                                                                                                                                         protozoacide;
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                                                                                                                                                                                                                                                                                                           vaccine; malaria;
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RESULT 9
ADM86519
ID ADM8
XX ADM867
AC ADM8
XX MA1
DT 03-J
XX MA1
CX MA1
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Best Local S
Matches 385
                                                                                                     29-JAN-2001;
26-OCT-2001;
                                                                                                                                                                                               28-AUG-2003
                                                                                                                                                                                                                                 US2003161839-A1
                                                                                                                                                                                                                                                                                                    Malaria; vaccine; merozoite immune response; diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                useful as a diagnostic reagent, in antibody production, and as a vaccine against malaria. The antibody may also be used for detecting and treating chronic malaria infection. The present sequence represents a recombinant production in the present sequence represents a recombinant sequence represents a recombinant sequence.
             (LYON/)
(ANGO/)
(COHE/)
(VOSS/)
                                                                                                                                                         25-JAN-2002; 2002US-00057532.
                                                                                                                                                                                                                                                                                                                                                         pET(50)MSP1-42 P. falciparum MSP142 (3D7) protein.
                                                                                                                                                                                                                                                                                                                                                                                             03-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                ADM86519;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADM86519 standard; protein; 431
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             ANGOV E.
COHEN J D.
VOSS G.
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                                                                 LYON J A.
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2001US-0347563P.
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Pred. No. 6e-136;
); Mismatches
                                                                                                                                                                                                                                                                                                                       protein-142; MSP-142;
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               RESULT 10
ABB79623
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AC ABB79
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AC ABB79
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Z1-OC
Z1-OC
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Meroz
KW Meroz
KW Proto
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                                                                   Merozoite
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21-OCT-2002
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Query Match
Best Local S
Matches 385
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                                                                                                                                                                DTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNISQHQCVKKQCPENSGCFRHLDE
                                                                                                                                                                                                                                                                                                                                                                                 LESDLMOFKHISSNEYIIEDSFKLLNSEQKNTLLKSYKYIKESVENDIKFAQEGISYYEK 141
                                                                                                                                                                                                                                                                                                                                                                                                                                      TMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIFTFNLNLNDILNSRLKKRKYFLDV
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                                                                                                                                                                                                                                       VNKIDDYLI NLKAKINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNPYDFEAI KKLIND
                                                                                                                                                                                                                                                                                                             VLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKTDEQKKESKFLPFLTNIETLYNNL 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                           TMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIFTFNLNLNDILNSRLKKRKYFLDV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HHHHHHSSGLVPRGSGMKETAAAKFERQHMDSPDLGTDDDDKAMADIGSIEGRGTMAISV
 PLFDGIFCSS
                                 PLFDGIFCSS
                                                                       REECKCLLNYKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRKKITCECTKPDSY
                                                                                                       REECKCLLNYKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRKKITCECTKPDSY
                                                                                                                                             DTKKDMLGKLLSTGLVQNFPNTI ISKLIEGKFQDMLNISQHQCVKKQCPENSGCFRHLDE
                                                                                                                                                                                                                   VNKIDDYLINLKAKINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNPYDFEAIKKLIND
                                                                                                                                                                                                                                                                                        VLAKYKDDLES I KKVI KEEKEKFPSSPPTTPPSPAKTDEQKKESKFLPFLTNI ETLYNNL
                                                                                                                                                                                                                                                                                                                                                                  LESDIMOFKHISSNEYIIEDSFKLINSEOKNTLIKSYKYIKESVENDIKFAQEGISYYEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Angov E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97.0%;
ilarity 89.5%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A
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                                 391
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Plasmodium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 2008.5; DB Pred. No. 6e-136; 0; Mismatches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Voss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>ი</u>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----SGSGTMAISV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            expressed P. This sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a method
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coli expressed P. falciparum MSP-1 recombinant protein

(revised)
(first entry)

surface

protein-1;

MSP-1;

thoioredoxin; malaria; vaccine;

falciparum

standard;

protein;

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Chimeric. Escherichia coli.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present sequence is that of a recombinant protein comprising CC Escherichia coli thioredoxin at the N-terminus of plasmodium falciparum CC 3D7 merozoite surface protein-1 42 kDa fragment (MSP-1(42)). The protein CC was expressed in E. coli using vector pET-Trx42. This expression system CC diagnostic and vaccine antigen, providing proper covalent disulfide CC bridging can be achieved. The present invention relates to the production CC of large amounts of MSP-1(42) which maintain conformational epitopes CC critical to epitope formation pure form. The vaccines are useful CC against malaria or for eliciting immune responses against P. falciparum. CC in vitro monitoring of malaria infection or prognosing the response to CC treatment of malaria patients, and for production of antibodies used for malaria antigen detection or as therapeutic or prophylactic agents. CC (Updated on 29-AUG-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 546 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New vaccine comprising Plasmodium falciparum MSP-142 protein and an adjuvant, useful against malaria or for eliciting immune responses against P. falciparum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 88-90; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2002-590798/63.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-JAN-2001; 2001US-0264535P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-JAN-2002; 2002WO-US002554
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                                                                                                                                                                                                      LESDLMQFKHISSNEYIIEDSFKLLNSEQKNTLLKSYKYIKESVENDIKFAQEGISYYEK 141
                                                                                                                                                                                                                                                                 TMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIFTFNLNLNDILNSRLKKRKYFLDV
                                                                                                                                                                                                                                                                                                             HHHHHHSSGLVPRGSGMKETAAAKFERQHMDSPDLGTDDDDKAMADIGSIEGRGTMAISV
                   DTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNISQHQCVKKQCPENSGCFRHLDE
                                                                             VNKIDDYLINLKAKINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNPYDFEAIKKLIND
                                                                                                                                          VLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKTDEQKKESKFLPFLTNIETLYNNL
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DTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNISQHQCVKKQCPENSGCFRHLDE
                                                                                                                                                                                                                                                TMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIFTFNLNLNDILNSRLKKRKYFLDV
                                                                                                                          VLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKTDEQKKESKFLPFLTNIETLYNNL
                                                                                                                                                                                    LESDLMQFKHISSNEYIIEDSFKLLNSEQKNTLLKSYKYIKESVENDIKFAQEGISYYEK
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                                                                                                                                                                                                                                                                                                                                                                          Conservative
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                                                                                                                                                                                                                                                                                                                                                                                         97.0%;
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                                                                                                                                                                                                                                                                                                                                                                         Score 2008.5; DB 5; Pred. No. 8.3e-136; 0; Mismatches 4;
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RESULT 11
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AC ABP71
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                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 89.9
Matches 385; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to a recombinant plasmodium falciparum merozoite protein, (MSP)-1 42 which retains it a native folding. The protein is useful as a diagnostic reagent, in antibody production, and as a vaccine against malaria. The antibody may also be used for detecting and treating chronic malaria infection. The present sequence represents a recombinant E. coli expressed P. falciparum MAP-1_42 protein expressed in clone pET-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New recombinant Plasmodium falciparum merozoite protein (MSP)-142 which retains its native folding, useful for detecting and preventing malaria infection, and for antibody production.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 546 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 93-95; 104pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-JAN-2001; 2001US-0264535P.
26-OCT-2001; 2001US-0347564P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MSP-1_42; merozoite protein; protozoacide; vaccine; malaria; mosquito
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-APR-2003
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                                                                                                                                                                                                                           TMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIFTFNLNLNDILNSRLKKKRKYFLDV
VLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKTDEQKKESKFLPFLTNIETLYNNL
                                                                             LESDLMQFKHISSNEYIIEDSFKLLNSEQKNTLLKSYKYIKESVENDIKFAQEGISYYEK
                                                                                                             LESDLMOFKHISSNEYIIEDSFKLLNSEQKNTLLKSYKYIKESVENDIKFAQEGISYYEK 141
                                                                                                                                                                                           TMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIFTFNLNLNDILNSRLKKRKYFLDV
                                                                                                                                                                                                                                                                                                      HHHHHHSSGLVPRGSGMKETAAAKFERQHMDSPDLGTDDDDKAMADIGSIEGRGTMAISV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PLFDGIFCSS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MSP1_42 (3D7)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     546
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                                                                                                                                                                                                                                                                                                                                                                                                                                       97.0%;
                                                                                                                                                                                                                                                                                                                                                                                                          Score 2008.5; DB 6
Pred. No. 8.3e-136;
0; Mismatches 4;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein sequence in clone pET-Trx42
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 6;
                                                                                                                                                                                                                                                                                                                                                            -----SGSGTMAISV 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 546;
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VLÄKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPÄKTDEQKKESKFLPFLTNIETLYNNL

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RESULT 12
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                                                               Query Match
Best Local S
Matches 385
                                                                                                                                                                                          The invention relates to a malaria vaccine which comprises Plasmodium falciparum merozoite surface protein-142 (NSP-142), and an adjuvant consisting of A, B, C, D, and E. The invention also relates to a method for inducing protective immune response to malaria. The invention is used as diagnostic reagent for antibody production or as vaccine against malaria infection. The present sequence is Escherichia coli expressed P. falciparum MSP142 (3D7) protein sequence in pET-Trx42. This sequence is used to illustrate the method of the invention.
                                                                                                                                                      Sequence 546 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (LYON/)
(ANGO/)
(COHE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2003-843522/78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lyon JA,
                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; SEQ ID NO 1; 41pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Malaria vaccine comprises Plasmodium falciparum merozoite surface protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-JAN-2001;
26-OCT-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-JAN-2002; 2002US-00057532.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Malaria ; vaccine ; merozoite surface protein-142 ; MSP-142 immune response; diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pET-Trx42 P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADM86518;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADM86518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (voss/)
                                                               Local Similarity
nes 385; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    382
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                         w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LYON J A.
ANGOV E.
COHEN J D.
VOSS G.
standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REECKCLLNYKQEGDKCYENPNPTCNENNGGCDADATCTEEDSGSSRKKITCECTKPDSY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Angov E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   falciparum.
                                                                  Conservative
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2001US-0347563P.
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                                                               Score 2008.5;
Pred. No. 8.3e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Vogs
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                                                                                    .3e-136;
                                                                                                           DB 7;
                                                               Indels
                                                                                                      Length
                         --SGSGTMAISV
                                                                  41;
                                                                  Gaps
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RESULT 13
AAB83926
ID AAB83
XX AAB83
XX AAB83
XX AAB83
XX Major
XX Major
XX Major
XX Major
XX Plasm
XX Plasm
PN WO200
XX Plasm
YN Hui G
XX Produ
PT Forms
YN WPI;
DR WPI;
DR WPI;
DR WPI;
DR WPI;
XX Produ
PT Forms
YX Examp
XX Examp
XX Examp
XX The p
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                                                                                                                                                WPI; 200
N-PSDB;
                                                                            Producing malaria vaccine, useful for treatment or prevention of all forms of malaria in humans, by expressing immunogenic merozoite protefragment in a baculovirus system.
                                                                                                                                                                                                                                                                                                  12-NOV-1999; 99US-0165178P
01-DEC-1999; 99US-0168327P
22-AUG-2000; 2000US-0226861P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Major merozoite surface protein-1; MSP1-42; melittin signal malaria vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A major merozoite surface protein-1 fragment of 42kDa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB83926 standard; protein; 375
                                                Example 3; Page 87-88; 95pp; English.
                                                                                                                                                                                                 Hui GSN, Lap-Yin P,
                                                                                                                                                                                                                                                                                                                                                                      09-NOV-2000; 2000WO-US031064.
                                                                                                                                                                                                                                                                                                                                                                                                       17-MAY-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200134188-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Plasmodium falciparum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAB83926;
                                                                                                                                                                                                                                (UYHA-) UNIV HAWAII.
(UYCH-) UNIV CHINESE HONG KONG
(QUEE-) QUEEN EMMA FOUND.
                                                                                                                                                2001-335879/35.
DB; AAF89840.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           537
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              82
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNISQHQCVKKQCPENSGCFRHLDE 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VNKIDDYLINLKAKINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNPYDFEAIKKLIND 261
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNISQHQCVKKQCPENSGCFRHLDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKTDEQKKESKFLPFLTNIETLYNNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKTDEQKKESKFLPFLTNIETLYNNL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIFTFNLNLNDILNSRLKKRKYFLDV 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIFTFNLNLNDILNSRLKKRKYFLDV 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                     99US-0165178P.
99US-0168327P.
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                                                                                                   protein
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The present sequence represents a major merozoite surface protein-l terminal fragment of 42kDa (MSP1-42). This fragment is linked to a

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RESULT 14
ABB79626
ID ABB79
XX ABB79
AC ABB79
XX Plasm
XX Plasm
XX Meroz
XX Plasm
XX Mo200
XX O1-AU
PF 25-JA
XX 26-JA
XX RED
XX WPI;
XX WPI;
XX WPI;
XX New V
PT adjuv
PF again
XX Discl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                         New vaccine comprising Pl adjuvant, useful against against P. falciparum.
                                                                                                                                                                26-JAN-2001; 2001US-0264535P.
                                                                                                                                                                                           25-JAN-2002; 2002WO-US002554
                                                                                                                                                                                                                        01-AUG-2002
Disclosure; Page 95-96; 99pp; English.
                                                                                 WPI; 2002-590798/63.
                                                                                                                                                                                                                                                  WO200258727-A2.
                                                                                                                                                                                                                                                                           Plasmodium falciparum
                                                                                                                                                                                                                                                                                                       Merozoite surface protein-1; MSP-1; malaria; vaccine;
                                                                                                                                                                                                                                                                                                                                Plasmodium falciparum merozoite surface protein-1 42 kDa fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                   ABB79626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           melittin signal peptide, and then expressed in a in a silkworm/baculovirus system. The protein is used to prepare vaccine, which is used to treat or prevent malaria, caused befour species of Plasmodium that infect humans
                                                                                                                                                                                                                                                                                                                                                             21-OCT-2002
                                                                                                                                        (REED-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 375 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
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                                                                                                                                        REED ARMY INST RES WALTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LYNNLVNKIDDYLINLKAKINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNPYDFEAIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LYNNLVNKIDDYLINLKAKINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNPYDFEAIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YFLDVLESDLMQFKHISSNEYI IEDSFKLLNSEQKNTLLKSYKYI KESVENDI KFAQEGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MAISVTMDNILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIFTFNLNLNDILNSRLKKRK 76
                                                                                                                                                                                                                                                                                                                                                                                                                 standard; protein; 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KPD6YPLFDGIFCSS 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RHLDEREECKCLLNYKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRKKITCECT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SYYEKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKTDEQKKESKFLPFLTNIET
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                                                                                                          Angov E,
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ilarity 100.0%;
Conservative (
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                                         Plasmodium falciparum MSP-142 protein and st malaria or for eliciting immune response
                                                                                                           JD,
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; Pred. No. 3e-133;
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Best Local S
Matches 376
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 383
                                         29-JAN-2001;
26-OCT-2001;
                                                                                  25-JAN-2002;
                                                                                                              16-JAN-2003
                                                                                                                                         WO2003004525-A2
                                                                                                                                                                     Plasmodium falciparum
                                                                                                                                                                                              MSP-1_42; merozoite protein;
                                                                                                                                                                                                                                                       28-APR-2003
                                                                                                                                                                                                                                                                                   ABP71274;
                                                                                                                                                                                                                                                                                                              ABP71274 standard;
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              (REED-) REED
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1es 376; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                           SGCFRHLDEREECKCLLNYKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRKKIT
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                                                                                                                                                                                                                                                                                                                                                                                     CECTKPDSYPLFDGIFCSS
                                         2001US-0264535P.
2001US-0347564P.
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              ARMY INST RES WALTER
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Pred. No. 4.3e-133;
O; Mismatches 3;
                                                                                                                                                                                               protozoacide; vaccine; malaria; mosquito.
                                                                                                                                                                                                                          sequence in
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Best Local Similarity 99.2%;
Matches 376; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to a recombinant Plasmodium falciparum merozoite protein, (MSP)-1_42 which retains its native folding. The protein is useful as a diagnostic reagent, in antibody production, and as a vaccine against malaria. The antibody may also be used for detecting and treating chronic malaria infection. The present sequence represents a recombinant E. coli expressed P. falciparum MAP-1_42 protein expressed in pMBP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New recombinant Plasmodium falciparum merozoite protein (MSP)-142 which retains its native folding, useful for detecting and preventing malaria infection, and for antibody production.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 383 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Page 99-100; 104pp; English.
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                                                                                                                                                                                                                                                                                  KKRKYFLDVLESDLMQFKHISSNEYIIEDSFKLLNSEQKNTLLKSYKYIKESVENDIKFA 124
           CECTKPDSYPLFDGIFCSS 391
                                                   SGCPRHLDEREECKCLLNYKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRKKIT 372
                                                                                                                            EAIKKLINDDTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNISQHQCVKKQCPEN 312
                                                                                                                                                                  NIETLYNNLVNKIDDYLINLKAKINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNPTDF
                                                                                                                                                                                 NIETLYNNLVNKIDDYLINLKAKINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNPYDF 252
                                                                                                                                                                                                                                         QEGISYYEKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTPPSPAKTDEQKKESKFLPFLT 192
                                                                                                                                                                                                                                                                                                 KKRKYFLDVLESDLMQFKHISSNEYIIEDSFKLLNSBQKNTLLKSYKYIKESVENDIKFA 132
                                                                                                           EAIKKLINDDTKKDMLGKLLSTGLVQIFPNTIISKLIEGKFQDMLNISQHQCVKKQCPEN
CECTKPDSYPLFDGIFCSS 383
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                                                                                                                                                                                                                                                                                                                                                                                              Score 1968; DB 6; Length 383; Pred. No. 4.3e-133; O; Mismatches 3; Indels
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Search completed: May Job time : 189 secs

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2006, 00:20:35

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RESULT 5
US-09-710-000-8
            APPLICANT: Lab-yin, Pang
TITLE OF INVENTION: Malaria Vaccine
FILE REFERENCE: 23461-2001100
CURRENT APPLICATION NUMBER: US/99/710,000
CURRENT FILING DATE: 2000-11-10
PRIOR APPLICATION NUMBER: 60/226,861
PRIOR FILING DATE: 2000-08-22
PRIOR APPLICATION NUMBER: 60/165,178
PRIOR APPLICATION NUMBER: 60/165,178
PRIOR APPLICATION NUMBER: 60/168,327
PRIOR FILING DATE: 1999-12-11
PRIOR FILING DATE: 1999-12-11
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                                                                                                                                                                                               Sequence 8, Application US/09710000
Patent No. 4660498
GENERAL WIFORWATION:
APPLICANT: Hui, George, S.N.
APPLICANT: Ho, Walter K.K.
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; OTHER INFORMATION: E
; OTHER INFORMATION: S
; Patent No. 6855322
US-10-057-531A-1
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PRIOR APPLICATION NUMBER: US 60/264,535;
PRIOR FILING DATE: 2001-01-26;
PRIOR APPLICATION NUMBER: US 60/347,564;
PRIOR FILING DATE: 2001-10-26;
NUMBER OF SEQ ID NOS: 12;
SOPTWARE: APPLE Macintosh Microsoft Word 6.0;
ENGTH: 546;
TYPE: DET
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Best Local &
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ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                              382 PLFDGIFCSS 391
                                                                                                                                                                                                                                                                                                                                                                                                                                   322 REECKCLLNYKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRKKITCECTKPDSY 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  417 DTKKONLGKLLSTGLVQNFFNTIISKLIBGKFÓDMLNISQHÓCVKKÓCFENSGCFRHLDB 476
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SEQ ID NOS:
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Sequence in pET-Trx42
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Pred. No. 4.9e-144;
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RESULT 6
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; OTHER INFORMATION:
US-09-710-000-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; SOFTWARE: Fa.
; SEQ ID NO 8
; LENGTH: 375
; TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 375;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Unknown
                                                                         377 KPDSYPLFDGIFCSS 391
                                                                                                            301
                                                                                                                                     317
                                                                                                                                                                257 KLINDDTKKDMLGKLLSTGLVQNFPNTIISKLIEGKFQDMLNISQHQCVKKQCPENSGCF 316
                                                                                                                                                                                                                    181
                                                                                                                                                                                                                     197 LYNNLVNKIDDYLINLKAKINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNPYDFEAIK 256
                                                                                                                                                                                                                                                                         137 SYYEKVLAKYKDDLESIKKVIKEEKEKFPSSPDTTPPSPAKTDEQKKESKFLPFLTNIET 196
                                                                                                                                                                                                                                                                                                            61 YFLDVLESDIMOFKHISSNEYIIEDSFKLLNSEQKNTLLKSYKYIKESVENDIKFAQEGI 120
                                                                                                                                                                                                                                                                                                                             77 YFLDVLESDLMQFKHISSNEYIIEDSFKLLNSEQKNTLLKSYKYIKESVENDIKFAQEGI 136
                                                                                                                                                                                                                                                                                                                                                               17 MAISVTMONILSGFENEYDVIYLKPLAGVYRSLKKQIEKNIFTENLNLNDILNSRLKKQK-76.
                                                                                                             RHILDEREBCKCLLNYKQEGDKCVENPNPTCNENNGGCDADATCTBEBDSGSSRKKITCECT 376
                                     KPDSXBUEDGUEGSS 375
                                                                                            RHLDEREECKCLLNYKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRKKITCECT
                                                                                                                                               KLÍNDDTKKDMIGKLÍSTGLVQNFPNTIISKLÍBGKFQDMINISQHQCVKKQCPENSGCF
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                                                                                                                                                                                                                                                       SYYÉKVLÁKYKDÓLÉSÍKKVÍKÉEKÉKFPSSPPTTPPSPÁKTDÉQKKÉSKFLPFLTNÍET 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FastSEQ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               amino acid sequence of PfMSP-142
                                                                                                                                                                                                                                                                                                                                                                                                                             95.1%; but
100.0%; Pr/
                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1970; DB 2; I; Pred. No. 2.5e-141; 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 375;
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; ORGANISM: Plasmodium falciparum 3D7 MSP142 SOFTWARE: Apple Macintosh Microsoft Word SEQ ID NO 5
LENGTH: 383
TYPE: PRT Sequence 5, Application US/10057531A
PAtent No. 685332
GENERAL INFORMATION:
APPLICANT: Lyon, Jeffrey A.
APPLICANT: Angov, Evelina
TITLE OF INVENTION: Isolation and Purification
ITLE REFERENCE: 003/241/SAP PRIOR APPLICATION NUMBER: US 60/264,535 PRIOR FILING DATE: 2001-01-26 PRIOR APPLICATION NUMBER: US 60/347,564 PRIOR FILING DATE: 2001-10-26 NUMBER OF SEQ ID NOS: 12 CURRENT APPLICATION NUMBER: US/10/057,531A CURRENT FILING DATE: 2002-01-25 6.0

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Query Match Best Local Similarity Matches 376; Conserve

Conservative

95.0%;

Score 1960; DB 2; Pred. No. 3.6e-141; 0; Mismatches 3;

Length 383;

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Gaps

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